

MANUFACTURERS' RECORD

A Weekly

Southern Industrial and Hardware

Newspaper.

VOL. XII. No. 24. WEEKLY.

BALTIMORE, JANUARY 21, 1888.

\$2.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Sole Manufacturers of

EUREKA PACKING

JAS. SMITH & CO.

Steam, Hydraulic and Locomotive Packing,
OF EVERY DESCRIPTION.
Send for Prices.

Works, 413 to 421 Race St., Cor. of Crown.

Office & Store, 137 Market St., Philadelphia.

Dealers in

MANUFACTURERS', MILL and ENGINEERS'
SUPPLIES
OF EVERY DESCRIPTION.
CIRCULARS AND PRICE-LISTS MAILED UPON APPLICATION



Milling Outfits for Flour and Meal.

WE MAKE ROLLS AND PORTABLE MILLS COMPLETE.

Manufactory Established in 1851.

Pamphlets with Prices Mailed Free.

NORDYKE & MARMON CO., INDIANAPOLIS, IND.



ELEVATORS

Send for Illustrated Circulars.

MORSE ELEVATOR WORKS.

MORSE, WILLIAMS & CO.

Successors to
CLEM & MORSE

Manufacturers and Builders of HYDRAULIC STEAM, BELT and Hand-Power, PASSENGER and FREIGHT ELEVATORS | With most approved Safety Devices.
Office: 411 CHERRY STREET, Dumb-Waiters, Automatic Hatch-Doors, etc.
Works: FRANKFORD AVE., WILDEY & SHACKANAXON STS. PHILADELPHIA, PA.
Branch Office, 108 Liberty Street, NEW YORK.

Report of the AQUEDUCT Commissioners.

[NEW CROTON AQUEDUCT, NEW YORK.]

AN ELABORATE VOLUME, CONTAINING AUTHORITATIVE TABLES BY THE CHIEF ENG., B. S. CHURCH. JUST ISSUED.

PLANT (by actual count from Table 13.)

Number of Ingersoll Drills used..... 242
Number of Drills of all other kinds..... 103
All headings where Ingersoll Drills were used exclusively have been completed, except the section under

PROGRESS (by actual figures from Table 8.)
Harlem River, now being driven by Ingersoll Drills and Air Compressors. Send for description of Aqueduct, with Engineers' Tables of Progress and Catalogue. Sent free. We have procured a limited number of the Report of the Aqueduct Commissioners, and will send them by express on receipt of \$5, actual cost to us.

Average weekly progress in best 10 headings that used Ingersoll Drills exclusively (omitting all idle weeks). 38.73
Average weekly progress in best 10 headings that used other drills exclusively (omitting all idle weeks) 31.68
DIFFERENCE OF 20 PER CENT. IN FAVOR OF INGERSOLL DRILLS.

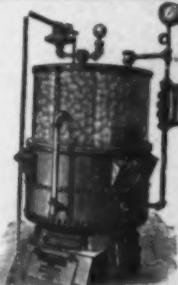
INGERSOLL ROCK DRILL CO.,

10 Park Place, New York City.



The "GORTON" Boiler.

"PERFECTION IN HOUSE HEATING BY STEAM."



The GORTON BOILER is a Wrought Iron Sectional Tubular Independent Steam Boiler, and needs no brick work in setting. The GORTON BOILER is made of Best Refined Iron and Steel. Can be used as Self-Feeding or Surface-Burning. It has been four seasons before the public, and received the highest praise of "Press, Architects, Builders and Physicians." The "GORTON" House Heater turns either Hard or Soft Coal. Send for Illustrated Circular.

GORTON & LIDGERWOOD CO..

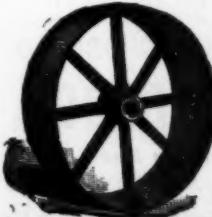
Sole Manufacturers,
96 LIBERTY STREET, NEW YORK.

Thomas K. Carey & Bros.

21 S. CHARLES STREET, BALTIMORE.

Write for New
Machinery Catalogue.

LEATHER AND RUBBER BELTING,
Cotton and Woolen Mill Supplies.
LATHES, PLANERS, DRILLS,
Engines, Shapers, Gear Cutters, &c.



THE MEDART PATENT WROUGHT * RIM * PULLEY.

OVER 300,000 NOW IN USE. THE LIGHTEST, STRONGEST, BEST BALANCED and CHEAPEST in the WORLD.

Shafting, Hangers, Couplings, &c.

MEDART PATENT PULLEY CO.,

1906 TO 1916 N. MAIN STREET, ST. LOUIS, MO.
Stores: 99 to 101 W. Second St., Cincinnati.
24 & 26 S. Canal St., Chicago.

FRANK W. SWETT, MANUFACTURER OF BAND SAWS,

69 SOUTH CANAL ST.
CHICAGO, ILL.

EVERY BLADE WARRANTED

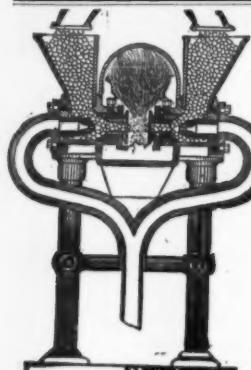


Stedman's Improved Disintegrator and Pulverizer.

This Mill will disintegrate or pulverize materials of all kinds, for brick and tile, for cement and fire brick, and slag from open air furnaces for use in rolling mills, and materials for foundry facings, iron ores, animal matter in almost all conditions—in fact almost any material that can be disintegrated. It is an improvement over any yet made and the result of practical experience.

Send for Descriptive Circular.

STEDMAN'S
Foundry & Machine Works,
AURORA, IND.



PNEUMATIC PULVERIZER.

The principle of pulverization consists in the employment of

TWO POWERFUL OPPOSING CURRENTS

of dry super-heated steam, so arranged that they continuously charge themselves with crushed or granulated material, and by the great force and velocity of the steam currents the minerals are dashed against each other with such power of concussion as to cause the hardest ores to be pulverized to any degree of fineness desired. The high temperature of the super-heated steam currents employed, through which every minute particle of ore must pass, causes them to become very hot and dry, which produces a beneficial effect upon sulphurites and ores containing rusty Gold. The light weight and simplicity of construction of the Pulverizer, the extremely small and inexpensive wearing parts are the WONDER and SURPRISE of all who witness its operation. The Company are prepared to furnish complete plants for pulverizing

10 to 200 Tons Per Day,

including a Sectional Steam Boiler supplying all the power required.

PNEUMATIC PULVERIZER COMPANY,

L. F. HOLMAN, Pres.
F. A. LUCKENBACH, Supt.

2 and 4 Stone Street, New York.

WRITE FOR PARTICULARS.



Roller Detachable Chain Belting



Detachable in every Link
FOR IMPROVED

ELEVATORS,
Conveyors,
AND
DRIVING BELTS.

FOR HANDLING
Coal, Ores, Grain,
CLAY, BRICK, &c.

ADDRESS THE
The JEFFREY MFG. CO.

121 W. STATE ST.,
Columbus, Ohio.

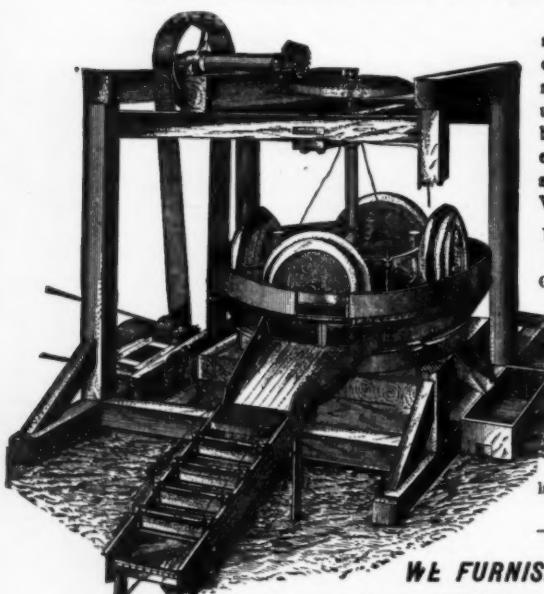
Also Manufacturers of the
Legg Coal Mining Machines
and Rotary Power Coal Drill.

Send for Illustrated Catalogues.

R. SWORMSTEDT & CO.
Agents, Baltimore.

Sectional View of Pulverizer.

WISWELL Ore Pulverizer and Amalgamator COMBINED.



The following testimonial from Mr. Marsden, of the firm of Farrel & Marsden, manufacturers of stone-breakers & ore-crushers, Ansonia, Conn., speaks volumes for the Wiswell Mill:

Wiswell Electric Mining Machinery Co.:

GENTLEMEN: After carefully inspecting your mill and seeing it in operation, I do not hesitate to say that it is one of the best, if not the best pulverizer and most complete gold saving machine I have ever seen.

Please accept congratulations for your success.

S. L. MARSDEN.

WE FURNISH

A Complete Mill for \$2,500.

DELIVERED ON BOARD CARS.

For further information address

WISWELL
Electric Mining Machinery Company,
A. A. REEVE, Treas.

4 Post-Office Square, Boston, Mass.

**STEEL
CASTINGS**

→CHESTER STEEL CASTINGS CO.←

Rooms 407 Library Street, Philadelphia.

Works, Chester, Pa.

FROM 1-4 to 15,000 lbs. WEIGHT.

True to pattern, sound, solid, free from blow-holes, and of unequalled strength.

Stronger and more durable than iron forgings in any position or for any service whatever.

40,000 CRANK SHAFTS and 30,000 GEAR WHEELS of this steel now running prove this.

CRANK SHAFTS and GEARING specialties.

STEEL CASTINGS of every description.

Send for Circulars and Prices to

Buy "THE NEW SOUTH"

Handsome Bound
in Cloth.
Price, 50c.

Manufacturers' Record Co.,

PUBLISHERS,
BALTIMORE,
Maryland.

M. C. BULLOCK MFG. CO.

MANUFACTURERS OF

Diamond Pointed Rock Drills,
STEAM ENGINES and BOILERS,

Lang's Patent Band Friction Hoisting Machinery,

FOR MINES, BLAST FURNACES, DOCKS, ETC.

STRAIGHT LINE ENGINES.

Address,

GENERAL OFFICE: 138 Jackson St., Phenix Building. Lake and Tallman Av., CHICAGO, U. S. A.

BACON

Winding Engines,
Furnace Hoists,
Mine Hoists.

(With or without Boilers.)

"Mining Plants," Concentrating Works, and Dredging Machinery Furnished Complete.

CPELAND & BACON,
85 Liberty Street, New York.

309 Arch Street, Philad.

References: { Croton Magnetic Iron Mines, Brewster's, N. Y.
Crown Point Iron Co., Crown Point, N. Y.
Belvidere Iron Co., 52 Broadway, N. Y.
Sea Island Chemical Co., Beaumont, Tex.



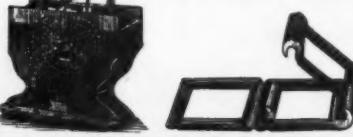
EWART'S PATENT CHAIN BELTING

LINK BELT MACHINERY.

Elevating and Conveying Machinery.

EMPLOYING EWART CHAIN.

For Coal, Phosphate, Tan, Ore, Stone, &c.



BURR & DODGE,

39 S. Holliday Street,
BALTIMORE, MD.

Link Belt Machinery Co., Chicago, Ill.
Send for new catalogue, containing all the latest improvements in Elevators and Conveyors.

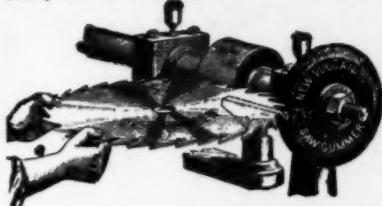
123 and 125 N. 5th Street, Philadelphia, Pa.

VULCANIZED RUBBER BELTING, PACKING, HOSE.

THE OLDEST AND LARGEST

Rubber Belting With Smooth Metallic Rubber Surface.

This company has manufactured the largest Belts made in the world for the Principal elevators at Chicago, Buffalo and New York.



VULCANITE

EMERY

Saw Gummer

DOES NOT
CASE HARDEN.

DURABLE,
SAFE AND STRONG.



MANUFACTURERS IN THE U. S.

Steam and Water Hose.

RUBBER "TEST" HOSE, made of Vulcanized Para Rubber and Carbolized Duck.

Cotton "CABLE" HOSE, Circular, Woven, Seamless, Antiseptic,

for the use of Steam and Hand Fire Engines, Force Pumps, Mills, Factories, Steamers and Brewers' use.

Patent Elastic Rubber Back Square Packing

Rubber Matting, Mats, Stair Trends, etc., for Halls, Flooring, Stone and Iron Stairways, etc.



New York Belting and Packing Co.

Sole Mfrs., 15 PARK ROW, NEW YORK.

BOILER and PIPE COVERINGS.



ABSOLUTELY

FIRE PROOF,

Light and Cheap.

EASY TO APPLY.

MINERS and MANUFACTURERS,
BRAIDED PACKING, MILL BOARD,
SHEATHING and SPECIALTIES.

ASBESTOS

CHALMERS-SPENCE CO., 419-425 Eighth Street, New York.

34 S. Second Street, PHILA.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

131 First Ave., Pittsburgh, Pa.

19 Pearl St., Boston, Mass.

144 & 146 Lake St., Chicago, Ills.

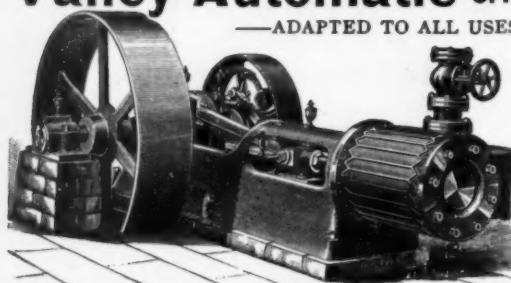
131 First Ave., Pittsburgh, Pa.

<p

Valley Automatic ^{CUT OFF} Engines

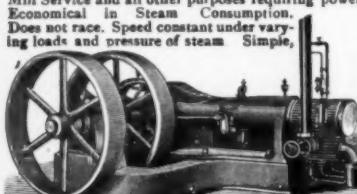
ADAPTED TO ALL USES REQUIRING—

Superior Regulation and
Economical Use of Steam.
Send for Illustrated Catalogue.



BECK AUTOMATIC ENGINE.

For Electric Light, Flour, Cotton, Woolen and Rolling Mill Services and all other purposes requiring power. Economical in Steam Consumption. Does not race. Speed constant under varying loads and pressure of steam. Simple,



durable in construction. Requires no more space than double disc engines. Contracts

W.M. C. COOKE, Baltimore, Md.

JAS. MAHONY & SON,
New York City.
EVANS & SON MACHINE CO.,
New Orleans, La.

taken for complete steam plants, including boilers and all connections, masonry and erection. All work guaranteed. Send for catalogue and full particulars. Also builders of Portable, Vertical and Stationary Engines. Boilers of all styles, and Saw Mills. Address TATLOCK MANFG. CO., Chambersburg, Pa.



STEAM ENGINES

Adapted to Heavy, Continuous Work. Cost no more than ordinary Engines. For descriptive circulars, address

Chandler & Taylor, Indianapolis, Ind.

Cleveland Ship Building Co.

SUCCESSORS TO

Cuyahoga Steam Furnace Co.

CLEVELAND, OHIO.

BLOWING ENGINES

FOR

Blast Furnaces

Steel Plants

A SPECIALTY.

OUR NEW BLOWING ENGINE

NOW FOR SALE, SIZE:

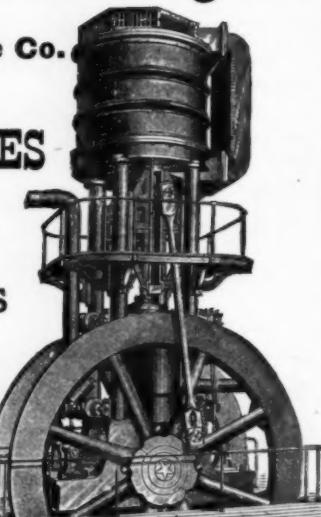
Steam Cylinder 36x48 | Air Cylinder 34x48

STEAM HAMMERS,

From 1,000 to 5,000 lbs.

Engines and Boilers.

Correspondence Solicited.



BOILERS

MAHONING BOILER WORKS
ESTABLISHED 1863.
PIPES, STACKS, BEAMS, ROOF TRUSSES,
BLAST FURNACES & ROLLING MILL WORK.
WM. B. POLLOCK & CO. YOUNGSTOWN, OHIO.

JARVIS PATENT FURNACE FOR SETTING STEAM BOILERS.



Economy of Fuel, with increased capacity of Steam Power. Like the Siemens Process of Making Steel, it utilizes the waste gases with hot air on top of the fire. Will burn all kinds of waste fuel without a blast, including Sicca Coal, Sawdust, Logwood Chips, &c. Send for Circulars.

Jarvis Engineering Co.,
A. F. UPTON, Treas. and Gen'l Manager,
61 Oliver St., Boston, Mass.

SOUTHERN REFERENCES:

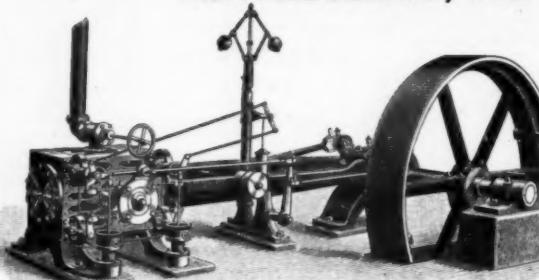
Eagle & Phenix Mfg. Company, Columbus, Ga.
Anniston Mfg. Co., Anniston, Ala.
J. P. King Mfg. Co., Augusta, Ga.
Rose Mining Co., Charleston, S. C.
Maryland Pavement Co., Baltimore, Md.
Brush Electric Light Co., Baltimore, Md.
Baltimore, Md.
Peterburg, Va.
Basin Fertilizing Co., Baltimore, Md.
Tanner & Delaney Engine Co., Richmond, Va.
Richmond, Va.

Graniteville Mfg. Co., Graniteville, S. C.
Charleston Bagging Co., Charleston, S. C.
P. H. Mayo & Bros., Richmond, Va.
Phosphate Mining Co., Beaufort, S. C.
Brush Swan Electric Light Co., Norfolk, Va.
Columbus Ice & Refrigerator Co., Columbus, Ga.
Lenoir Manufacturing Co., Lenoir, East Tennessee.
Vancleave Mill, Graniteville, S. C.
Charleston Electric Light Co., Charleston, S. C.

For First-Class Steam Boilers, Stacks, Sheet Iron and Plate Work, Oil and Water Tanks,
Address Enterprise Boiler Co., Youngstown, O.

ECLIPSE CORLISS ENGINES.

Frick Company, Engineers, Builders, WAYNESBORO, PA.



40 to 1,000 H. P.
Made.

Condensing Non-Condensing & Compound.
Send for Corliss Circular.

Ice-Making and
Refrigerating
Machinery.
Send for Ice-Machine Circular.

Special Automatic Electric Light Engines, Steam Boilers, T action and Portable Engines, Saw Mills. Send for our General Catalogue.

BALL ENGINE CO. ERIE, PA. AUTOMATIC CUT-OFF ENGINE

The Most Perfect Governing ever obtained.



Embodying a
new system of
**ABSOLUTE
REGULATION**
against a change
of load and boiler pressure.

WE CHALLENGE THE WORLD
on good regulation. Only Engine which Absolutely Holds to constant speed under all changes of load. An indispensable feature. Send for Circular L.

R. C. WRIGHT, Sales Agent, Birmingham, Ala.

McIntosh, Seymour & Co., Auburn, N. Y.

Automatic Cut-off Engines

5 to 300 Horse Power.

Economy in Fuel Consumption,
Close Regulation,
Great Durability and Simplicity,
Perfect Workmanship and Design.

Unrivalled in these qualities, our engines are suitable for all purposes, especially where high speed and difficult service are required, as in electric-light plants, rolling mills, etc. Send for Illustrated Catalogue.

SELLING AGENTS :
Young & Thomas, 42 Cortlandt St., New York City.
Harlan Page, 143 & 145 N. 3d St., Philadelphia, Pa.
Smith & Courtney, 1419 Main St., Richmond, Va.

FOR THE LOWEST-PRICED FIRST-CLASS (—) ENGINES & BOILERS

ADDRESS

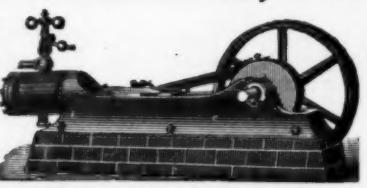
GEO. W. TIFFET, SONS & CO.
BUFFALO, N. Y.

5 to 500 H. P. Special Stock Sizes 5
to 50 H. P., both Stationary and
Semi-Portable.

A few good Second-Hand Engines and Boilers are
for sale at an astonishingly low figure. Must be sold
to make room for stock. Correspondence solicited.
Mention this paper.

SKINNER ENGINE CO. Erie, Pa.

Awarded THREE GOLD MEDALS
by the World's Industrial and Cotton Centennial Exposition of New Orleans, La.



More than 2000 in Use.

Manufacturers of Portable and Stationary Engines and Boilers,
including the well known Skinner Portable return flue boiler.
Send for ILLUSTRATED CATALOGUE AND PRICES.

Continental Boiler Scale Preventive.

Positively prevents and removes scale in steam boilers without acting on any of the metals. A real necessity for Southern steam users. Saves fuel, repairs and trouble, and doubles the life of the boiler. Sold on its merits, and satisfaction guaranteed or no pay. Write for sample.

The Gleason Boiler Compound Co., Cleveland, Ohio.



THE "JUNIOR" Automatic Engine,

While embodying the essential features of the Westinghouse Standard Engine, well built, economical and serviceable, is nevertheless

The Lowest Priced Automatic Engine in
THE MARKET.

15. 25 and 35 H. P. only.

Westinghouse Machine Co.
PITTSBURGH, PA.

SELLING DEPARTMENT CONTROLLED BY

Westinghouse, Church, Kerr & Co.

17 Cortlandt Street..... New York.
97 Fifth Avenue..... Pittsburgh.
156 and 158 Lake Street..... Chicago.

Fairbanks & Co.

302 and 304 Washington Avenue..... St. Louis.
1812 Union Avenue..... Kansas City.
1330 Seventeenth Avenue..... Denver, Col.

Utah and Montana Machinery Co.

250 South Main Street..... Salt Lake.
East Granite Street..... Butte, Mont.

Parks & Lacy.

21 and 23 Fremont Street..... San Francisco.
33 and 35 N. Front Street..... Portland, Or.

The D. A. Tompkins Co.

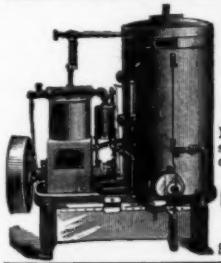
36 S. College St.... Charlotte, N. C.
46 S. Pryor St.... Atlanta,
Georgia.

It will pay you to write to WILLIAMS ENGINE CO., 447 North St., Baltimore, Md., for

AUTOMATIC ENGINES,
For any duty Electric Light Engines a specialty.
Quality high. Prices moderate. Address
WILLIAMS ENGINE CO.
447 North Street, Baltimore, Md.

Steam Engines, Boilers, Steam Pumps,
Eclipse Fan Blowers, Tire Benders,
manufactured; all guaranteed. Also, the LANDIS PATENT STEAM RADIATOR supplied. Address
The LANCASTER STEAM PUMP & MACHINE WORKS, Lancaster, Pa.

Queen City Pattern Works,
ALEX. D. CUNNY,
132 & 134 E. Second Street, Cincinnati, O.
Patterns made to order for Machinery, Stoves and
Ornamental Work. Metal Letters made and kept
in stock.



Acme Automatic Engine, With BRYANT'S Patent Safety Boiler.

Sizes 1, 2 and 4 H. P. Fuel, Kerosene (Coal) Oil, 110° to 150° fire test.
No dust, ashes, or smoke. No Skilled Engineer required. "Brake" Tests
show that 3½ gals. fuel will deliver a full H. P. on belt for 10 hours, in the
case of our 1 H. P. Engine and Boiler.

Rochester Machine Tool Works,
BUILDERS, ROCHESTER, N. Y.
SEND FOR CATALOGUE.

→Engines and Boilers←

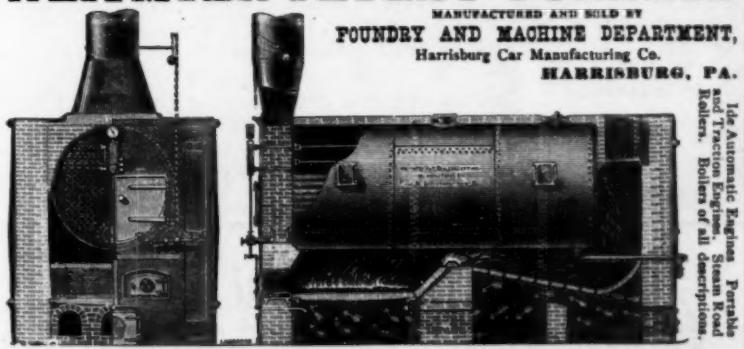
From 1 to 500 horse-power; Portable and Stationary, Horizontal and Vertical. Boilers of plain tubular type, locomotive fire-box pattern, vertical and two-flue, steel or iron, as desired. Engines, Plain Slide Valve or Automatic Cut-Off. Send for catalogue, giving exact requirements, that you may obtain our estimate. Freight paid your station if desired.

W. E. DREW, Agent,

S. C. FORSAITH MACHINE CO., Machinists and General Machinery Dealers, Manchester, N. H.

WEITMYER PATENT FURNACE

MANUFACTURED AND SOLD BY
FOUNDRY AND MACHINE DEPARTMENT,
Harrisburg Car Manufacturing Co.
HARRISBURG, PA.



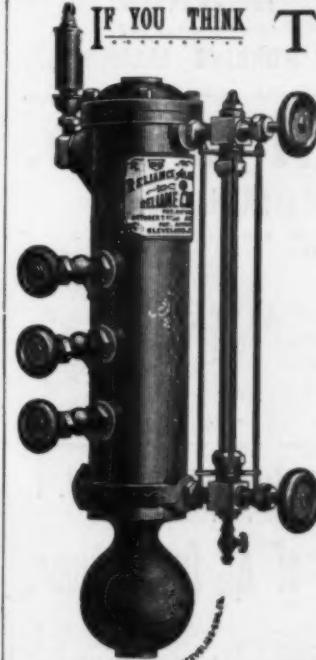
Address FOUNDRY AND MACHINE DEPARTMENT, Harrisburg, Pa.

McLAUGHLIN'S IMPROVED ADJUSTABLE STEAM FLUE CLEANER.

The only Adjustable Jet Flue Cleaner made. It fits any size tubes, from 1 to 10 inches. Patented December 14, 1886. Agents wanted everywhere. Send for Circular G. Address Geo. G. McLaughlin Mfg. Co.
137 Oliver Street,
BOSTON.



IF YOU THINK THE RELIANCE Safety Water Columns



Promote carelessness, you are greatly mistaken. There is not a man living, be he skilled engineer or negro stoker, who will not, from the very nature of things, watch the water closer with than without them. They are as certain to not whistle if the water is right as they are to whistle if it is wrong, and those in attendance take good care to keep it right. Through extra watchfulness and these automatic alarms the best economical results are obtained, and the danger of explosions and damage from too much and too little water is reduced to a minimum. They are a needed safeguard, and you can ill afford to be without them. They are for sale and warranted by dealers and boiler makers generally. Send for illustrated price-list.

RELIANCE GAUGE CO.

Argyle Building,
CLEVELAND, OHIO.

Ludlow Valve Manfg. Co.

Office and Works:

938 to 954 River Street, and 67 to 83 Vail Avenue,

TROY, N. Y.



VALVES

Double and Single Gate, $\frac{1}{2}$ inch to
1 inch—outside and inside
Screws, Indicators, etc., for
Gas, Water, Steam, Oil,
Used for Circulars.



Also Fire Hydrants, Yard and Wash Hydrants, Check and Foot Valves

ESTABLISHED 1852.

CAPITAL STOCK \$125,000.00.

INCORPORATED 1848.

• "STILL AHEAD AND BOUND TO WIN." •

The James Ohlen & Sons Saw Manufacturing Co.

Standard, Solid and Inserted Tooth Saws, Mill, Muley, Gang, Drag, Cross-Cut and Band Saws.

COLUMBUS, OHIO.

WHAT PEOPLE SAY:

"I am running one of your Chisel-Tooth Saws. Have been working in saw mills for past five years, but never found a saw equal to yours. Please send me catalogue. W. A. Williams. Wiss & Nelson, Jonesboro, Ind., Feb. 1, 1887, write: "The 64-in. gauge solid saw is doing splendid work; inclosed find draft for same. Make and ship us 12 gauge, same hand as other, soon as possible."

B. R. Edwards, Jacksonville, Fla., writes: "Saw received. Has been running steadily and not made one bad line. Draft inclosed."

— The Above Cuts Show Our Champion Chisel-Tooth Saw. —

It has been thoroughly tested on steam and friction feed, in all kinds of timber, and we guarantee to our patrons perfect satisfaction in every respect. Each set of teeth will cut from 100,000 to 200,000 feet. We advertise only practical possibilities, and stand by what we say, and guarantee that any saws bearing our trade mark (James Ohlen & Sons) are equal, if not superior, to any others in every respect, and will give satisfaction to those using them.

Write for Catalogue and mention this paper.

JAMES OHLEN & SONS COLUMBUS, OHIO



CORDESMA, MEYER & CO.

171 and 173 West Second Street, CINCINNATI, OHIO.

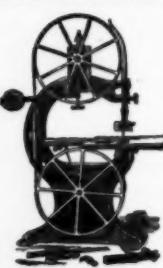
FINE GRADES OF LATEST



Wood Working Machinery OF EVERY DESCRIPTION.

Planing Mills, Furniture and Chair Factories,
Carriage, Wagon and Agricultural Works.

Write for our latest Catalogue and Price List. Correspondence solicited.



The Best Double Drum Sander IN THE WORLD.

Five Sizes—24, 30, 36, 40 and 48 inches wide.
For descriptive circulars and prices address

The EGAN COMPANY,

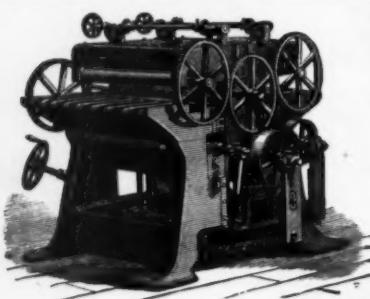
228 to 248 W. Front Street.

CINCINNATI, O.

Manufacturers of a complete line of

WOOD-WORKING MACHINERY.

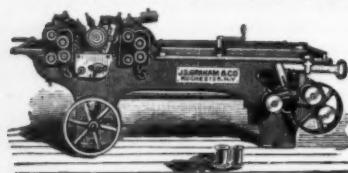
103



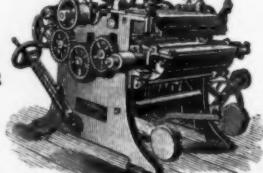
J. S. GRAHAM & CO.

261 LYELL AVENUE, ROCHESTER, N. Y.

Manufacturers of Planers and Matchers, Surfacing, Timber Planers, Resawing Machines, Gang Ripping Machines, Self-Feed Saw Tables, Moulders, Pony Planers, Etc.



SEND FOR PRICES.



W. COCKER, LOCKPORT, N. Y.

MANUFACTURER OF

SAWS of All Descriptions.

Also Inserted Tooth Cross-Cut Circular Saws for Shingle Mills & Specialty. Will do three times the work of any Butting or Drag Saw.

SHINGLE AND HEADING SAWS.

AGENT FOR

Orr's and Mixture's Gummers and Swages.

Send for Price-List.



E. & B. HOLMES,

BUFFALO, N. Y.

MANUFACTURERS OF

BARREL MACHINERY.

Chamfering, Howeling and Crozing Machines, Stave Dressers, Stave Jointers, Hoop Drivers, Crozing Machines, Heading Jointers, Heading Dressers, Beer Stave Binders, Stave Cutters, Leveling and Trussing Machines, Cylinder Stave Saws, Heading Saws, etc.

— STAVE, BARREL, KEG AND HOGSHEAD MACHINERY.—

See cuts of our WOOD-WORKING MACHINERY in the first issue of each month.

Correspondence solicited. Mention this paper.



TREVOR & CO.

Lockport, N. Y.

MANUFACTURERS OF

Shingle, Heading AND STAVE MACHINERY

AND SHINGLE AND HEADING SAWS.

HEADING SAWING MACHINES,
HEADING TURNERS,
HEADING JOINTERS,
VENEER CUTTING MACHINES,
STAVE EQUALIZERS,
STAVE CUTTERS,
SHINGLE JOINTERS,
SHINGLE SAWING MACHINES,
DRAG SAW MACHINES.

HANDLE MACHINERY.

Lathes for turning handles for Brooms, Mops, Forks, Hoes, Axes, Picks, Hammers, Cant Hooks, and for Ball-Bats, Peavy-Stocks, Pike-Poles, Spokes, Etc.

If you want machinery for
Staves, Heading, Shingles or
Veneer Cutting, send for our
catalogue "A". If you want
Handle Machinery, send for
catalogue "B".Please say where you saw
this advertisement. AddressTREVOR & CO.
Lockport, N. Y.

Veneer Machinery for Furniture Factories, Etc.

Strong, Solid, Durable, Accurately
Made, Double Drivers, Positive
Feed, Complete Adjustment,
Automatic Change of
Pitch.

Correspondence solicited.

COE & WILKES,

Painesville, Ohio.

Rotary-Cutting Veneer Machines.

CINCINNATI SAW & KNIFE WORKS.

RADCLIFF ROWE & CO.
40 & 42 PLUM ST.

Atlanta Saw Works.

MANUFACTURERS OF EVERY VARIETY OF SAWS
AND DEALERS IN

SAW MILL SUPPLIES.

Special attention given to repairing and satisfaction guaranteed.

Agents for L. Power & Co's Celebrated

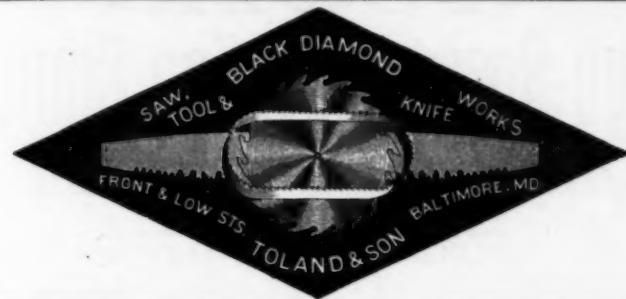
WOOD-WORKING MACHINERY.

Large and Well Selected Stock ready for shipment. Prices
Low. Liberal Terms. Write for Catalogue.

ATLANTA, - GEORGIA.

STEARNS MNFG. CO., ERIE, PA.
BUILDERS OF
Capacity 15,000 to 40,000 feet per day. CIRCULAR SAW MILLS
15 to 800 Horse-Power. **BOILERS** OF IRON
BAND SAW MILLS, with Friction or Steam Feed.

STEARN'S Fractional Head Blocks, Edgers, Cut-Off Saws, Trimmers.
The Wilkin Pony Gang. No foundation. Capacity 30,000 to 40,000 feet of Flooring per day. The Wilkin Heavy Gang Saw Mill for large mills. Lath and Picket Mills. Rebarred, Chiseled, etc.



THE PERFECTION BRICK PRESS,

An easy-working, quick-operating and powerful press. Will successfully press brick made on any Brick or Tile Machine.

The Wrought-Iron Tempering Wheel,
The most thorough mud temperer known. Tempers faster, mixes better and runs lighter than any wheel made.

Barrows, Trucks, Molds, Kiln Doors, &c.
Write us for prices.

C. W. RAYMOND & CO.
DAYTON, O.

Mention Manufacturers' Record.

The Spiral Pug Mill AND QUAKER BRICK MACHINE.

Capacity 40,000 Perfect Brick Per Day

Great Saving in Labor and Expense

We contract to furnish complete Brick-yard outfit, — Engines and everything needed complete. Write for our handsomely illustrated catalogue, containing valuable information. Estimates furnished. Correspondence solicited. Address

FLETCHER & THOMAS, Indianapolis, Ind.

Mention Manufacturers' Record.



The STANDARD STEEL WORKS

Locomotive and Car Wheel

TIRES

Manufactured from

OTIS STEEL.

Office, 220 S. Fourth Street,
PHILADELPHIA, PA.

Representatives:

J. H. BELCHER, Room 24, Astor House
Office, New York City.

JOHN McNAULY & CO., Church & Rec
tor Streets, New York City, N. Y.

NORTON, REED & CO., Baltimore, Md.

HUBBERT & HUBBERT, 428 W. Main
Street, Louisville, Ky.

GEO. KIRBY & CO., 122 Central
Ave., Cincinnati, O.

ANDREW WARREN, 707 N. 10th St.,
St. Louis, Mo.

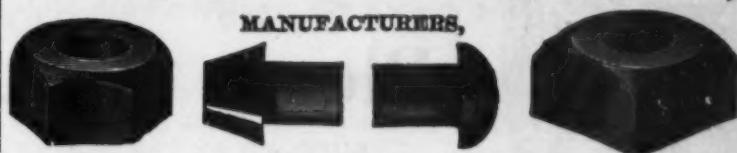
J. S. BREWER, 136 Lake St., Chicago,

E. L. LEACH, 30 Oliver St., Boston
Mass.



HOOPES & TOWNSEND,

MANUFACTURERS,



KEystone BOILER RIVETS,

Cold Punched, Chamfered, Trimmed and
Drilled Square and Hexagon Nuts.

Finished and Case-Hardened Steel Hexagon Nuts.

BRIDGE RODS and RIVETS.

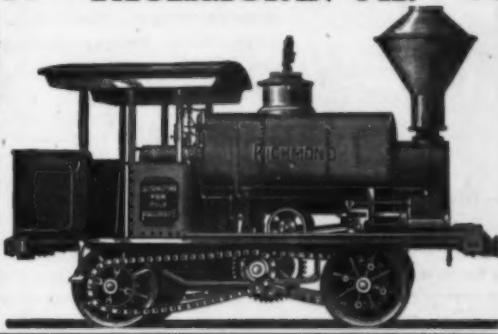
Builders' IRON Work.
TANK and COOPERS' RIVETS.

PHILADELPHIA, PA.

ESTABLISHED IN 1866.

The Richmond Locomotive & Machine Works, RICHMOND, VA.

SUCCESSORS TO THE
Tanner & Delaney Engine Company.
Having added to their extensive plant a large
number of special tools, are prepared to build
the latest and most approved designs: Light
Locomotives, Passenger, Freight, Tramway,
Nosieless Street Motors and Mine Engines.



Also Pole Road Locomotives, the only ones
in service of the kind made. Engine, Gear, Chain
and Portable, is to give horse power. Builders,
Standard and Special, is to go 1 to 1000
Cwt., Water, Crossing and other Heavy Ma-
chinery. Correspondence invited. Catalogue
specifications, photographs and estimates fur-
nished on application.

JOHN STEPHENSON COMPANY NEW YORK



TRAMWAY CARS OF EVERY DESCRIPTION
LIGHT, ELEGANT, DURABLE

STEEL RAILS

PENNSYLVANIA

Standard Sections

Light Sections

Street Rails

Fish Plates,
Frogs, Switches

STEPHEN W. BALDWIN
SALES AGENT

16 lbs. Full Size.

STEEL COMPANY

50 to 80 lbs. per yard

16 " 45 " "

30 " 88 " "

Bolts & Nuts,
and Crossings.

NO. 2 WALL STREET
NEW YORK N.Y.



MONTAGUE & CO.

MANUFACTURERS OF

* FIRE BRICK, * Standard Sewer Pipe AND CULVERT PIPE.

Double Strength, with Improved Sockets.

CHATTANOOGA, TENN.



Pure Water AND Plenty of It. SUPPLIED BY THE

Kirkwood Wind Engine

The best appliance for pumping water of modern times.

Progress Engine & Machine Works

M. C. R. R. SUMMERFIELD, MD.

THE LONG & ALLSTATTER CO., HAMILTON, OHIO.



Laundry Machinery.

Largest Stock. Latest Improvements. Fullest Line.



The A. M. DOLPH CO.

224 Washington Street,
CHICAGO, ILL.

Cor. 9th St. and Freeman Ave.,
CINCINNATI, O.

BARNES' PATENT UPRIGHT DRILLS,

20 to 32 inch swing, with both worm and lever feed, self feed and back-gear'd

Barnes' Patent Engine Lathe,

15 inch swing, 6 foot or 8 foot bed.

These machines are made a specialty in our factory.

They have advantages not found in other machines in this line.

It will pay parties desiring to purchase or know more about these machines to send for full description and prices to

W. F. & JOHN BARNES' CO., No. 221 Ruby St., Rockford, Ill.

Barnes' Water Emery Tool Grinder.

Has no Pumps.

No Valves.

No piping to supply it with water.

It has nothing to get out of order; is always ready for use.

It is as easily managed as a grindstone, and will give vastly better results. It will be sold subject to approval.



Sebastian, May & Co.'s Improved Screw Cutting

FOOT AND LATHES POWER

Drill Presses, Shapers, Band, Circular and Scroll Saws. Machinists' Tools and Supplies. Lathes on trial. Catalogue mailed on application.

182 West Second Street, CINCINNATI, O.

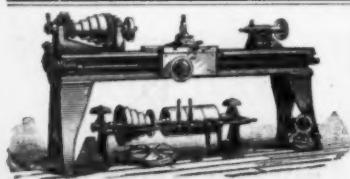
\$175.

\$60.

17, 24 & 27-INCH Engine Lathes

New Designs.

THE MULLER MACHINE TOOL CO.
8th and Evans Streets,
CINCINNATI, O.



PALMER, CUNNINGHAM & CO., Limited.

SEND FOR
Catalogue "C"

AGENTS FOR
KEARNEY & FOOT
FILES.

607 Market Street, PHILADELPHIA, PA.

TOOLS FOR MECHANICS
CHUCKS,
DRILLS,
REAMERS,
SCREW PLATES,
Etc.

-POWER- High-Speed Traveling Cranes.

We are now prepared to build HIGH-SPEED POWER TRAVELING CRANES for any capacity of load, any length of runway and any width of span, with one or two trolleys on the bridge. These trolleys to work either slow or fast, together or independently, in like or in opposite directions, horizontally or vertically, while the bridge can be traversing slow or fast at the same time in either direction. The speeds of bridge on runway are 100 feet and 200 feet per minute; the speeds of trolleys on bridge are 50 feet and 100 feet per minute, and there are four hoisting speeds of 5, 10, 20 and 40 feet per minute; all can be varied quickly, without the least shock or jar, from zero to maximum or to any intermediate speed. The load is always automatically sustained, thus avoiding absolutely the great danger and anxiety which are inseparable from the use of those cranes which require the operator to apply the brake. We have had one of these cranes of 20 tons capacity in constant use in our foundry for nearly two years, and we offer them with full confidence for the greatest range of service. We invite the correspondence of parties interested in the subject.

WM. SELLERS & CO. Incorporated, Philadelphia, Pa.



Build AND Repair Your Machinery



BY USING
Engine Lathes, Planers,
Chuck Lathes, Hand Lathes,
AND
MACHINE TOOLS GENERALLY
MANUFACTURED BY
LATHE & MORSE TOOL CO.
Worcester, Mass., U. S. A.

South Pittsburg Pipe Works.

Geo. E. Downing, Pres. JAMES BOWDISH, Vice-Pres. Dr. W. R. TOWNSEND, Secy.

Manufacturers of



South Pittsburg, Tenn.
WARREN WOOD & CO.
115 Broadway, N. Y.
EASTERN AGENTS.

CHATTANOOGA FOUNDRY & PIPE WORKS.

DAVID GILES, Pres. C. B. IBESTER, Vice-Pres. M. LLEWELLYN, Secy. and Treas.
Successors to D. GILES & CO., Chattanooga, Tenn., Manufacturers of

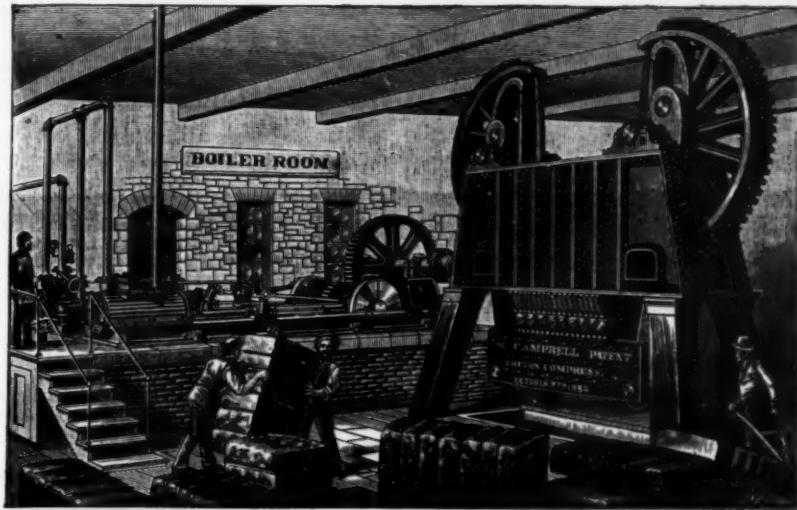


Also Castings and Patterns of Every Description made to order.

HOWARD & BULLOUGH'S

OPENERS, LAPPERS, REVOLVING FLAT CARDS, ELECTRIC STOP MOTION DRAWING FRAMES, SLUBBING, INTERMEDIATE, ROVING AND FINE JACKS, (NEW PATTERNS 1886) ALL MADE BY TOOL WORK; EVERY PART EITHER TURNED, MILLED OR PLANED, AND CONTAINING MANY PATENTED AND VALUABLE IMPROVEMENTS. WARPERS, COPPER CYLINDER SLASHERS, (New Models.)

RILEY & GRAY, — — **BOSTON, MASS.**
CARD CLOTHING, WOOLEN AND WORSTED MACHINERY, Etc., Etc.



A. M. DOLPH, President.
C. C. CAMPBELL, Vice-Pres't & Gen'l Man'gr.

J. R. CLARK, Secretary.
JOH. SHARP, Treasurer.

THE Campbell Cotton Compress Co.

Sole Manufacturers of the

→CAMPBELL COTTON COMPRESS.←

Undoubtedly the Most Desirable Compress Made.

It is the cheapest to install, costing only half the price of other makes.
It is the cheapest to run, requiring less fuel, attention and repairs.
It is the only compress profitable for a small market, as it can be run on small lots at a profit, where other compresses could be operated only at a loss.
It is therefore the only compress profitable for the interior, as it will earn a good profit with 30,000 bales or less, while it has a capacity of 40,000 to 60,000 bales per season.
It will compress to a density of 25 or more pounds to the cubic foot.
It is put up under the fullest guarantee.

Correspondence Solicited. Address

The Campbell Cotton Compress Co.

Offices, 59 and 61 Walnut Street, + CINCINNATI, O., U. S. A.

BROWN & KING, MANUFACTURERS OF
COTTON MILL SPECIALTIES.

Roller Covering, Loom Pickers and Strapping.

Dealers in Roller Coverers, Stock and Tools; Cotton and Woolen Mill Supplies.

Full Line "Hick's" United States Standard Ring Travelers, Mill Wire Goods Spring Cotters, Belt Hooks, Lacing, &c., kept constantly on hand.

Wrought Iron Pipe Fittings and Brass Goods. Southern Agents for the celebrated "B. C. & D. Oak Tanned Patent Lap Belting, Galvin Compound Wedge Gate Valve, Imhauser's Watchman Time Detectors, Diamond Emery Wheel Machine Co., &c.

Offices and Salesroom. No. 62 S. Broad Street. ATLANTA, GA.



JOHN E. RANDLE & CO.
FOUNDEES AND MACHINISTS
MEMPHIS, TENN.
MANUFACTURERS OF
AJAX STEAM-POWER COTTON PRESS.
Brooks & Albertson Horse-Power Presses.
DEALERS IN
ATLAS ENGINES AND BOILERS.
Mill and Plantation Machinery of every description.
Send for catalogue. Correspondence solicited.

Buy "THE NEW SOUTH."

Patent Needle Pointed
Hardened and Tempered Steel Wire
For COTTON and WOOLEN MILLS.

T. K. EARLE MFG. CO. SEND FOR SAMPLES.
WORCESTER, MASS.

UPRIGHT DRILLS



→A SPECIALTY.←
ALL SIZES

WITH

Patent Quick Return

AND

LATEST IMPROVEMENTS.

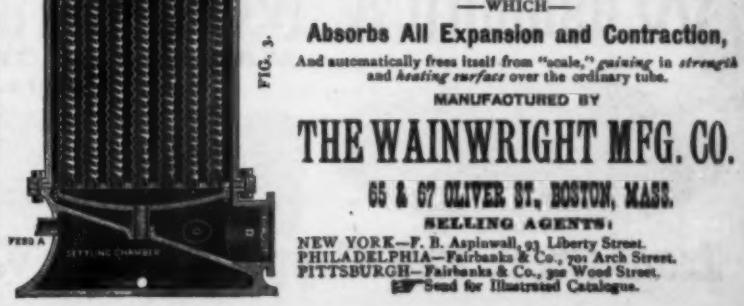
For catalogue and price address

BICKFORD DRILL CO.

Cor. Front and Pike Streets,

CINCINNATI, O.

— THE WAINWRIGHT —
Exhaust Feed-Water Heater
IS CONSTRUCTED WITH
CORRUGATED TUBING,



— WHICH —

Absorbs All Expansion and Contraction,
And automatically frees itself from "scale," gaining in strength
and heating surface over the ordinary tube.

MANUFACTURED BY

THE WAINWRIGHT MFG. CO.

65 & 67 OLIVER ST., BOSTON, MASS.

SELLING AGENTS:

NEW YORK—F. B. Aspinwall, 93 Liberty Street.

PHILADELPHIA—Fairbanks & Co., 701 Arch Street.

PITTSBURGH—Fairbanks & Co., 10 Wood Street.

Send for Illustrated Catalogue.

The DEANE STEAM PUMP CO.

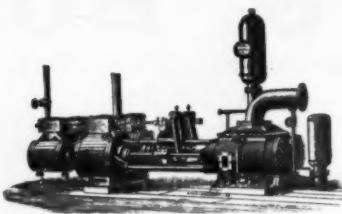
HOLYOKE, MASS.—

BUILD

STEAM * PUMPING * MACHINERY

OF EVERY VARIETY.

Send for New Catalogue No. 22.



The DEANE STEAM PUMP CO.

NEW YORK, BOSTON,
CHICAGO, PHILADELPHIA, ST. LOUIS,

MAKE A SPECIALTY OF

Water Works ENGINES

FOR THE SUPPLY OF CITIES AND TOWNS.

WORTHINGTON STEAM PUMPS

SOUTHERN SELLING AGENTS
KENTUCKY MACHINERY CO.
Louisville, Ky.

W. H. PERRY'S MACHINE WORKS,
Nashville, Tenn.

LIVERMORE FOUNDRY & MACH. CO.

Memphis, Tenn.

Boston

Philadelphia

SEND FOR ILLUSTRATED CATALOGUE

HENRY R. WORTHINGTON

NEW YORK

Chicago

St. Louis

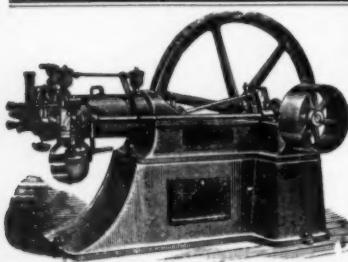
SOUTHERN SELLING AGENTS
MECKLENBURG IRON WORKS
Charlotte, N. C.

E. V. WHITE & CO.
Norfolk, Va.

M. SCHWARTZ

New Orleans, La.

San Francisco



Over 10,000 in Use.

Otto Gas Engine

20 to 70 per cent less Gas consumption than ANY OTHER ENGINE.

Working Without Boiler, Steam, Coal, Ashes or Attendance.

Started instantly by a Match, it gives full power immediately. When stopped, all expense ceases.

Guaranteed to Consume 25 to 75 Per Cent. less Gas than any other Gas Engine Doing the same Work.

No explosions, no fires nor cinders, no gauges, no pumps, no engineer or other attendant while running. Recommended by insurance companies. UNSURPASSED IN EVERY RESPECT for hoisting in warehouses, printing, ventilating, running small shops, &c. Sizes: 1 to 25-Horse power.

Branch Office, 130 Washington St., Chicago. OTTO GAS ENGINE WORKS, Schleicher, Schumm & Co. 33d & WALNUT STS., PHILADELPHIA.

WE MANUFACTURE

Automatic Sprinklers,
Roving Frames,
Rabbeth, Sherman, } Spindles,
Whitin, Sawyer, }
Double Adjustable Spinning Rings,
Twisters, Spoolers, Reels,
Spooler-Guides,
Bobbin-Holders,
Banding Machines,

Slasher } Warpings,
Chain } Creels and Beams,
Warper } Reeds and Combs,
} Stop Motions & Clocks,
Ballina Machines,
Slasher Cut-Markers,
Separators } Doyle,
} Sharples,

Lever Screws for Roving and
Spinning Frames, Lifting-Rod
Cleaners, Traveller Brushes.
Temples } Dutcher, } With Latest
} Hardaker, } Improvements.
Shuttle Guards, Durkin's
Thick and Thin Place Preventer,
Getchell's Improved Thompson
Oil Can, Belt Hole Guards.

Milled Machine Screws,
Special Milled Work
of all kinds, etc., etc.

REPAIRS

For Spindles, Temples and all
our Machinery furnished
at short notice.

Send for Prices.

TELEGRAPH ADDRESS AND RAILROAD
STATION, MILFORD, MASS.

GEORGE DRAPER & SONS, HOPEDALE, MASS.

FRICITION DRILL.

Tested Four Years Before Placing on the Market. Superseding the Ratchet.

Machinists, Boiler Makers, Mechanics and all parties having use for a Ratchet will find this Drill a great saving of time. Can be used in contracted places where a Ratchet cannot. Send for Illustrated Circular and Price List. Mention Paper.

F. F. WATERS MANF'G CO.

266 WASHINGTON STREET, BOSTON, MASS.

Smith's Patent. Patented June 5, 1888.

Instantaneous Clutch. No Lost Motion. Noiseless.

PIPE & BOILER COVERINGS

TURBINE WATER WHEELS.

YORK IMPROVED

—Flour Mill, Dredging and Saw Mill Machinery.—

Shafting, Pulleys, Hangers, Couplings, { Send for Catalogue. }

BOXES AND GEARING.

JNO. A. McCONNELL & CO., 119 Water St., Pittsburg, Pa.

SECTIONAL AND PLASTIC. PAMPHLET AND SAMPLES FREE. NAME THIS PAPER.

Engines and Boilers

OF ALL KINDS AND FOR EVERY DUTY.

MACHINERY

OF EVERY DESCRIPTION.

YORK MFG. CO.

YORK, PA.

ALEXANDER BROWN & SONS, { ESTABLISHED 1811. }

BALTIMORE. Transact a General Foreign and Domestic Banking Business.

Buy and sell Bills of Exchange on Great Britain, Ireland, and other foreign points. Issue Commercial and Travelers' Credits in Sterling, Francs or Dollars, available in any part of the world. Make Telegraphic Transfers of Money between this and other countries. Make Collection.

BROWN BROTHERS & CO., New York, Philadelphia and Boston.

tions of Drafts. Railroad, Municipal and other loans negotiated, and advances made on Cotton, Grain, Tobacco and other approved securities. Interest allowed on Deposits of Banks, Bankers, corporations and individuals. Members of Baltimore Stock Exchange. Buy and sell Stocks and Bonds in this and other cities. Private wire to Philadelphia and New York.

BROWN, SHIPLEY & CO., London and Liverpool.

Washburn & Moen Mfg. Co., Worcester, Mass.

MAKERS OF IRON AND STEEL.

MANUFACTURERS OF



Iron, Steel and Copper Wire, Wire Rope, Barbed Wire.

New York Warehouse, 18 Columbus Street.
Chicago Warehouse, 127 Lake Street.

Manufacturers' Record.

PUBLISHED EVERY SATURDAY BY THE
MANUFACTURERS' RECORD CO.

R. H. EDMONDS, EDITOR.

OFFICE,
COR. EXCHANGE PLACE AND COMMERCE STREET
BALTIMORE.

NEW YORK OFFICE:
Building, 18 Cortlandt St.

SUBSCRIPTION \$3.00 A YEAR.

BALTIMORE, JANUARY 21, 1888.

REFERRING to the attempt to deceive the public by the establishment in Durham, N. C., of a paper called the Southern Tobacconist & Manufacturers' Record, the Fruit Grower, of Virginia, says:

"A similar outrage was perpetrated upon an old-established Virginia journal not long since, but the trick did not work. The old journal was too well and favorably known."

As stated last week, the words "Southern Tobacconist" are in very light type, while the words "Manufacturers' Record" are brought out in very bold type. If our readers will turn to the first page and notice the letter "M" at the beginning of the name of this paper, they will see that it is of peculiar design, and that between the black lines forming the letter there is some fancy scroll work. Now this North Carolina paper has even imitated that letter to the small details. Wherever the name "Manufacturers' Record" appears, at the top of editorial columns, &c., in that paper, it has been set in exactly the same type as in this paper, thus in every detail carrying out the attempted deception as closely as possible. And yet the Raleigh News & Observer takes occasion to make a fling at the MANUFACTURERS' RECORD because it "is endeavoring to instil protection into Southern minds," and claims that the publishers of the Durham paper are gentlemen of too much honor to be guilty of attempting to deceive. Because of its hatred to a paper that advocates protection, the News & Observer lends itself to a defense of such a barefaced attempt at deception as this. If the publishers of the Durham paper are men of such high honor (and of them personally we know nothing whatever), it is strange that they should adopt this method of showing it. The man who infringes upon a patent or a trade-mark and seeks to build up on the reputation of another is not usually esteemed a model of honor. And just where the difference comes in in this case we cannot see.

THE Iron Age has made an important change in form, reducing the size of its pages to 9x13 inches and enlarging the number, thus bringing it into something like magazine form. It is needless to say that this is a great improvement, in keeping with the progressive character of that old stand-by of the iron trade.

A Free Trade Fallacy.

The "oil trust" has been, on several occasions, objected to in the strongest terms at the command of the MANUFACTURERS' RECORD. And why? Because, under a combination called a trust, monopolists tried to obtain control of the entire cotton-seed oil product of the South, not at its intrinsic value, but at a far lower arbitrary valuation made by that miscalled trust. Had the monopoly been able to carry out its plans, every cotton planter would have been the sufferer. Fortunately the discussion of the subject by the MANUFACTURERS' RECORD warned the public, and out of that warning began the movement which culminated in the formation of a live competitor, with abundant capital, that destroyed the plans of the monopoly, and gave assurance to every producer that a fair price would be maintained for his cotton seed.

It may not be generally known that one of our correspondents, Mr. D. A. Tompkins, of Charlotte, N. C., while writing a letter, at the request of the editor, for the MANUFACTURERS' RECORD, against the "oil trust," conceived the idea of establishing a rival to it, broke off the letter in half, and used what was intended to be a part of it as a circular to capitalists, setting forth the opportunity for building up such a company. In connection with Mr. Oliver and others, Mr. Tompkins soon had the enterprise in shape, and with his \$5,000,000 company has already built eight immense oil mills.

Whoever applied the term "trusts" to modern combinations, such as the oil monopoly was designed to be, was a shrewd student of human nature. He knew that the term would inspire popular confidence in whatever corporation bore it, because the average citizen would accept the idea it conveyed, and have confidence accordingly. The number of these so called trusts has multiplied rapidly within a few years. While some of these corporations are all that their names imply, the majority are monopolies of the most dangerous character. President Cleveland has noticed this, and in his recent message to Congress he called attention to them in plain and forcible words. It was the one redeeming feature of an otherwise objectionable and disappointing message. The trusts he referred to he defined as those "which have for their object the regulation of the supply and price of commodities made and sold by members of the combination." That comprehensive, clearly put definition covers the subject perfectly. No matter if the President did adroitly use it to assist his attack upon protection, by intimating that producers protected by the tariff laws combined to organize trusts whenever competition between them had "the effect of keeping the price of their products below the highest

limit allowed by such duty." The point he sought to make was that when prices were thus reduced, competitors would join in an effort to restrict production or to pursue any other policy that would be the most efficacious, and thus restore prices to the tariff standard. Virtually it would amount, he thought, to a pooling arrangement similar to those the trunk railroads employ to increase their profits. Following in the line of the President's argument, the New York Journal of Commerce said: "Against these truly dangerous monopolies there is one obvious means of defence. That is either to take off or to lower the duties which can no longer be demanded, in truth, for the protection of American industries. When any domestic manufacture has been developed to a point where its product can be sold in this country as cheap as the imported article, if the duty on that were abolished or reduced to a nominal amount for 'revenue only,' then the famous theory of protection, as expanded by its highest authorities, living or dead, is worked out in practice to the full, and a protective tariff is no longer needed. But that is the occasion, above all others, that would be seized upon by trusts to carry out their nefarious designs. The various competing establishments which had naturally brought down the prices would all be made partners in a league to put them up artificially to the 'tariff point.' It is then, the President says, that a case would seem to be presented for an easy reduction of taxation."

The nub of the President's argument thus clearly stated by the Journal of Commerce opens the way for exposing the very common free trade fallacy that, when domestic competition under protection has reduced prices below the tariff level, then it would be safe to remove tariff duties, because American manufacturers in those lines would be able to hold their own against all foreign competitors. The error of this supposition lies in the fact that if duties were removed foreign manufacturers would instantly endeavor to break down their competitors in this country by putting in their goods at prices far below the cost of production. It would not take more than one season to accomplish their desired end, but, having caused factories to close down and workmen to scatter, they would then advance prices to a point that would more than repay their temporary losses, while the trade of the next few years would give them greater profits than they are used to receive. Free trade Cobdenites in the United States scoff at a prediction of this nature, and call it a bugbear, but history is filled with instances of the carrying out of a policy of this kind, not once, but repeatedly, since this country grew from its colonial condition to be a nation.

The true way to keep down the power of monopolies, and consequently to maintain reasonable prices, is to adhere to protection, for under it the same thing that happened to the oil trust will be repeated whenever an American manufacturing "trust" is organized to monopolize the home market. No one in this country will long engage in any business at a loss. American industries are started to make money. We never engage in industrial enterprises for sentimental reasons. It is the fact now, as it has been from the beginning, that whenever it becomes evident that men are making money in any business there is plenty of capital ready to embark in the same line and compete for a share of the profits. This certain competition is an absolute security against manufacturing monopolies that are not protected by patents. Americans can protect themselves against the greed of domestic monopolists, but should the barriers they have erected against the concentrated capital and cheap labor of Europe be removed there would be, first, a destruction of their industries, and then an increase in the prices of foreign goods to a standard much higher than had prevailed under protection.

While, therefore, the President was right in calling attention to the dangers of such trusts as he defined, he was wrong in ascribing them to protection, and in recommending a tariff for revenue only as an obstacle to their creation and maintenance.

Imports of Ore and Metals.

The imports of metals continue very heavy, the value for November having been \$4,037,189 against \$3,254,149 in November, 1886. During the first eleven months of last year we imported \$55,078,886 worth of metals and iron ore, an average of over \$5,000,000 a month, and an increase of \$15,400,000 over the corresponding time in 1886. Our imports for the two periods compare as follows:

	Eleven months ended Nov. 30, '87.	Nov. 30, '86.
Iron ore, tons.....	1,140,937	954,846
Pig iron, tons.....	442,168	319,448
Scrap iron, tons.....	307,912	66,970
Scrap steel, tons.....	26,068	6,300
Bar iron, lbs.....	76,045,166	60,344,964
<hr/>		
Bars railway—		
Of iron, tons.....	841	6
Of steel, tons.....	191,008	89,648
Cotton ties, or hoops, lbs.....	47,876,066	22,886,450
Hoop, hand and scroll irons, lbs.....	70,740	754,875
Hoops, bands, &c., of steel, lbs.....	43,064,974	7,416,819
Ingots, blooms and bars of steel, lbs.....	663,870,309	272,818,454
Sheet, plate and tapers, iron, lbs.....	14,771,970	13,418,831
Tin plates, lbs.....	193,908,511	98,882,503
Wire rods, lbs.....	389,113,562	189,213,377
Wire and wire rope, lbs.....	5,705,812	5,643,771
Anvils, axes and forgings, lbs.....	8,380,975	3,840,972
Chains, lbs.....	7,919,533	3,221,531
Cutlery.....	31,390,697	31,648,108
Files, file blanks, rasps and floats.....	68,921	48,320
Fire-arms.....	996,124	801,029
Machinery.....	1,970,539	1,204,480
Needles.....	302,597	311,247
All other.....	1,363,138	1,387,262
Total, including iron ore	\$55,078,886	\$39,664,869

THE Maginnis Cotton Mills, New Orleans, La., have decided to increase their capital stock from \$500,000 to \$1,000,000 and enlarge their mill from its present capacity of 17,000 spindles to 40,000 spindle.

Fuel Gas vs. Natural Gas.

A year or two ago, when natural gas and its wonderful cheapness were attracting such wide attention, causing almost a revolution in some industrial interests, Messrs. Disston & Sons, the great saw manufacturers of Philadelphia, contemplated the removal of their immense plant to the natural gas regions. The undertaking, however, involved such immense interests that they investigated very carefully and thoroughly, and finally determined to abandon the idea after being convinced that by a new process it was possible to make fuel gas at their own works at such a low cost as to offset the advantage of natural gas. Last week the MANUFACTURERS' RECORD gave the facts regarding the remarkable success at the Disston works of this fuel gas made by the Loomis process. It is now demonstrated that this gas can be made so cheaply as to greatly reduce the cost of fuel, and its introduction into the South will counterbalance the only advantage which Pittsburgh and that section has possessed over the South, by having natural gas. Already Decatur has taken the lead and contracted for a \$200,000 plant to furnish this fuel gas to manufacturers at a cost not to exceed the equal of coal at \$1 to \$1.50 per ton, as well as to make gas for illuminating purposes. A glass manufacturer in Baltimore, who contemplates using this gas as fuel, has been offered a guarantee, with abundant security, of a saving of 33 $\frac{1}{3}$ per cent. compared with the cost of his coal, provided he would give the guarantor all that was saved over that amount. This gas can be made by individual establishments for their own use, as well as by special plants designed to furnish it to other manufacturers for fuel, and also to make at the same time illuminating gas.

ONE day last week a few business men were gathered together in a bank in Charlotte, N. C., and in a general conversation some comment was made on the proposed building of a cotton mill by a company recently organized there. It was said that the more mills the better for the city, as well as for the stockholders, and this remark meeting with approval, it was casually suggested that if those present believed that, let them show their faith by works. Then one gentleman proposed to organize a new company to build a second mill, and in ten minutes \$85,000 was subscribed. The next day \$30,000 was added to it, and it is probable that before the company can be organized the amount will run up to \$200,000. So Charlotte will soon have two mills under construction. This shows how Southern people can push matters when they are interested. Lynchburg is also doing something in the same line. Her people concluded to build a \$150,000 mill, but when they got well down to work on subscriptions they ran the amount up to \$200,000.

Cotton Mills.

The South is now turning its attention to cotton-mill building in such a way as to assure a rapid growth of this business, and one of the most satisfactory features of it is that the men who have been the longest engaged in cotton manufacturing are the most active ones in pushing the business. In view of the attention now being attracted by this industry, it is of interest to see how Northern cotton mills are prospering. A report of the dividends declared during 1886 and 1887 by the great mills of Fall River, Mass., shows that they are earning big profits. The dividends for these years were as follows:

	Corporations.	Capital.	Dividends.
			1886. 1887.
American Linen.....	\$ 400,000	12 1/2	13 1/4
Barnard.....	330,000	5	6
Bourne.....	400,000	6	12
Border City.....	800,000	8 1/2	12
Barnaby.....	400,000	6	8 1/2
Chace.....	500,000	6	6
Crescent.....	500,000	6 1/2	6
Davol.....	400,000	..	1 1/2
Flint.....	580,000	6	6
Globe Yarn.....	900,000	6	8
Granite.....	400,000	12	18
King Philip.....	1,000,000	6	6
Laurel Lake.....	400,000	4 1/2	6
Merchants'.....	800,000	8	7
Mechanics'.....	750,000	6 1/2	6
Metacomet.....	8,000	..	3
Narragansett.....	400,000	6	6
Osborn.....	600,000	8	6
Pocasset.....	..	..	8
Richard Borden.....	800,000	4 1/2	6
Robeson.....	950,000	4 1/2	6
Saginaw Mfg. Co.....	600,000	8	11
Shore.....	550,000	4 1/2	6
Slack.....	550,000	1 1/2	3 1/2
Stafford.....	550,000	7	12
Seacombe.....	400,000	..	5
Tecumseh.....	500,000	7	8
Troy.....	300,000	9 4/5	17
Union.....	750,000	16	21
Wampanoag.....	750,000	9 1/2	13
Weetamoe.....	550,000	4	4

With only two or three exceptions these mills, it will be seen, paid large dividends last year, and, moreover, doubtless added considerably to their surplus account, as is their rule. Now here are mills paying the heavy expense of shipping their cotton from the South to Massachusetts, and yet declaring in some cases 11, 12, 13, 17, 18 and 21 per cent. dividends, besides increasing their surplus. Of course, many of the mills did not do so well, but these very profitable mills have simply proved what can be done. The South, where the cotton is produced almost at the doors of the mill; where it is estimated there is saving in freight, commissions and insurance of \$5 a bale, as compared with Northern mills; where the climate is all that could be desired, and where power is cheaper, is the place for the cotton mills. We are glad to see that all over the South there is great interest in this subject, and that the outlook for cotton-mill building is unusually promising.

GADSDEN has scored a good success in securing Mr. L. W. Scovill, the noted hotel man, as purchaser of the fine Printup House, now building, at a cost of \$50,000 or \$60,000. Mr. Scovill will also take the Bellevue House on the Highlands, near Gadsden, and run the two in connection. This will make Gadsden one of the most desirable summer resorts in Alabama, as well as a delightful winter place. Good hotels are essential to the prosperity of any town, and Gadsden has done well in thus being able to offer two fine houses to the traveling public.

Internal Revenue Must Go.

Two Southern Senators have recently expressed the views of their constituents in opposition to the internal revenue laws. Senator Brown, of Georgia, opened the debate in a speech that presented the subject in every light, historic, economic, patriotic and moral. A day or two later he was followed by Senator Vance, of North Carolina. The first speaker is a strong protectionist; the second is one of the most earnest and plausible advocates of free trade, but diametrically opposed as they are on that issue, they are cordially agreed as to the necessity and duty of repealing the internal revenue taxes. In this they represent not only their personal convictions and the wishes of their respective constituencies, but also the opinions and desires of the vast majority of the Southern people. Behind them is a moral power that has not yet brought into action the great forces at its command, but is preparing to do so. This is the Women's Christian Temperance Union, an organization with an able leadership that has large bodies of earnest supporters in every State and Territory. This union has arrayed its members in opposition to the whiskey tax, and soon they will urge the abolition of the internal revenue system, and bring every influence they can command to bear upon Congress. When several hundred thousand intelligent, conscientious Christian women enter upon a work of this kind, supported by the moral convictions of the majority of American freemen, it will be up-hill business for the average Congressman to resist their assault in force. In spite, therefore, of the money and political power of the whiskey ring, we may hope to see this obnoxious system abolished before the close of the present session. Certainly it will be if the Women's Union will give Senator Brown's unanswerable speech.

a wide spread circulation, for the calm, dispassionate presentation he made of the evils attendant upon the enforcement of the law is certain to create such a disgust for it among all right-thinking citizens, that public opinion will swell into a mighty wave that will overwhelm every member of Congress who attempts to oppose it. The outlook is bright, although the repeal is not yet assured. But earnest work will secure it, and every true friend of the South should at once engage in it.

MESSRS. F. C. & E. H. BUFFUM, of Stanton, Fla., have issued a neat pamphlet entitled "The New South as a Field for Investment." This little book presents many facts worthy of the widest possible circulation. It sums up in excellent manner from the MANUFACTURERS' RECORD and other sources of information the wonderful progress made in five years by the South, and shows the opportunities offered for profitable investments.

The Tariff on Wool.

THE wool growers and woolen manufacturers in convention, at Washington last week, conferred together upon their mutual interests as affected by the tariff. Some free trade journals had asserted frequently that the sheep husbandmen and the manufacturers would never combine, and had predicted that this convention would end in a serious rupture. Doubtless "the wish was father to the thought," for in the proceedings there was nothing to justify the free trade forecast. On the contrary harmony marked the entire proceedings. The manufacturers agreed with the farmers that there ought to be a protective duty on wool heavy enough to save sheep husbandry of this country. A new schedule was prepared that substantially re-enacts the law repealed in 1883, when a reduction was made at the suggestion of congressional revenue reformers who insisted that it could do no harm. The reformers aforesaid will not acknowledge they were mistaken, but the farmers very soon learned to their cost that a serious blunder had been made, and they now demand a restoration of the ad valorem rate. The woolen manufacturers join in this demand, and also for such a change in the schedules and classifications as shall put a stop to the frauds now practiced under the carpet wool clause, and also give them a protection of at least 50 per cent. on the cloths they make, as an offset to the difference between the wages paid to employees here and in Germany and other countries of Europe. The convention passed resolutions endorsing the protection policy, which is necessary to the prosperity of farmers and manufacturers alike. Three points were set forth by the convention respecting the economic effects of the tariff upon the wool industry, viz:

1st. The repeal of the ad valorem tax in 1883 was followed by a great reduction of sheep, the aggregate loss between then and 1887 amounting to nearly 6,000,000.

2d. In 1859 this country used 65,749,635 pounds of wool. In 1861 the tariff was enacted, and under the protection it afforded the number of pounds of wool consumed in 1885 was 424,404,109 pounds.

3d. In 1860 the people of this country bought only 62.8 per cent. of woolen goods of American manufacture, while in 1880, in consequence of protection, the consumption of home-made woolen goods had increased to 81.9 per cent., or more than 19 per cent.

It was also resolved that, "as under the protective policy the United States has become the foremost manufacturing nation of the world, while its agriculture has been extended and diversified by the incentive of the most profitable markets known to men, prudence forbids the overthrow of a system of revenue under which such results have been obtained,

while the wages of labor and share of production paid to the American artisan are far greater than in any other country."

Such is the reply to that part of the President's message which related to wool from the sheep husbandmen and woolen manufacturers of the United States.

More Rolling Mills Needed.

Superintendent Dwyer, of the Birmingham Rolling Mills, in telling a Chronicle reporter of the new machinery for rolling steel plates from the ingots, to be made by the Henderson Steel Works, now nearly ready to start up at Birmingham, said:

Well, as you doubtless know, the capacity of the mills is 600 tons per week, and our orders call for iron in every shape and size. Just now we are filling a large order for small iron rails, and before we can finish one contract another is made for the same class of work. The local demand is also very great for boiler iron, and with the foreign demand for our products we have been behind on our orders in that class of iron for more than five years. I have never seen the time when these mills were not several months behind in its work. We sell iron in nearly every State in the Union. Why, it looks strange, but we are now filling an immense order for a firm in Los Angeles, California, and it is money in their pockets to buy from us, even with the heavy freights that the long distance necessitates.

For five years these great rolling mills have not been able to catch up with their orders, and are always two or three months behind in their work. Is any stronger argument needed to show why more rolling mills ought to be built?

Anniston's New Furnaces.

In giving a detailed description of the two big furnaces under construction at Anniston, the Hot Blast says:

But few people realize the immensity of the work now going on at the new furnaces or the wonderful effect that the completion of these furnaces will have upon all branches of trade in Anniston.

The work on the new furnaces was commenced in May last, and has been going steadily forward ever since. The stock house, 500 feet long and 75 feet wide, is nearly completed, and the two cast houses are now ready for the iron roofs, which will be placed on at once.

The foundations are all in, and the Whitewell hot blast stoves are nearly completed. Noble Bros. & Company have the contract for the construction of five blowing engines which will be large, massive and complete. They are made on the latest and most improved pattern, and will cost about \$100,000. The eighteen steel cylinder boilers, manufactured by J. & D. Noble, are completed, and are being placed in position. If the work proceeds at its present rate the furnaces will blow in during the early part of the summer.

The furnaces will be sixteen feet bosh and seventy-five feet high, and have a weekly capacity of 1,100 tons of pig iron each. They will use 5,500 tons of ore per week, or nearly 800 tons daily; 400 tons of coke per day, or 2,800 tons weekly; 200 tons of limestone daily, or 1,400 tons per week, being a total consumption per day of 1,400 tons of ore, coke and limestone, while other material, sand, etc., will make 160 tons additional, when the daily consumption will make a grand total of 1,560 tons. This will be equal to 100 car-loads per day brought into Anniston, and will require the services of six engines and train crews.

Revenue Census Statistics.

BY E. B. A.

[FOR MANUFACTURERS' RECORD.]

The report of Mr. Joseph S. Miller, the commissioner of internal revenue, who has made a very excellent administration of his office, gives some interesting facts.

The whole revenue receipts for 1887 were \$119,837,301, or an increase of nearly a million dollars over the year 1886. Of this amount \$87,750,000 were from spirits and fermented liquors, and \$30,000,000 from tobacco. The cost of collection was a little over \$4,000,000, or nearly 3½ per cent. of the whole.

The spirits produced were nearly 78,000,000 gallons. The bushels of grain distilled were 18,000,000, or over 4 gallons to a bushel.

In addition to what was produced there were 58,000,000 gallons of spirits in the warehouses at the beginning of the fiscal year. We thus have an enormous amount of 136,000,000 gallons of liquor on hand and made during the year ending July 1, 1887. This is two gallons and over to every man, woman and child in the country.

In looking at the distillation and revenue, four States alone produce \$66,000,000 of the whiskey receipts. These four States are Illinois, New York, Ohio and Kentucky, and three of these States, producing \$53,000,000 of the amount, have only 181 distilleries out of 4,905; these three States are New York, Illinois and Ohio. With one-twenty-fifth of the distilleries they make over two-thirds of the whiskey. The fact shows what masses of capital are concentrated in the business in these States.

The smallest amount of this revenue comes from Vermont, only about \$30,000. The largest amount comes from Illinois, nearly \$35,000,000. The largest number of distilleries is in North Carolina, 1,462, and producing only \$2,000,000, and Virginia comes next with 1,075 distilleries.

The principal material used was corn; of the 18,000,000 bushels used nearly 13,000,000 being corn, and rye 3,000,000. In this revenue business 3,587 men were employed to conduct the business.

In the tobacco business the receipts were a little over \$30,000,000, of which \$16,000,000 came from chewing and smoking tobacco, and \$11,250,000 from cigars and cheroots.

The number of cigars made was 3,788,000,000, and the cigarettes 1,584,000,000, or 90 to every man, woman and child. Curiously enough in the manufacture of tobacco and cigars, New York leads, using 27,000,000 pounds and making 1,000,000,000 cigars, while Pennsylvania comes next, using 18,000,000 pounds of tobacco and making 88,000,000 cigars. In the manufacture of tobacco Virginia leads, using 54,000,000 pounds, while Missouri stands next, manufacturing 42,000,000 pounds. New York made only 20,000,000 pounds and Pennsylvania only 4,000,000 pounds. Little New Jersey manufactured 39,000,000 pounds, and North Carolina 26,000,000.

In the administration of whiskey there are some profoundly significant and startling facts. The whole tendency of the plan seems to favor the large capitalists at the sacrifice of the small distillers. For instance, no man is allowed to distill whiskey whose still makes less than 20 gallons in three days. This regulation cuts off the great mass of small farmers in the mountains who are too far from market to transport their corn, and yet who cannot distill on a large enough scale to meet the requirements of the law.

The profits in the whiskey business are enormous. In the Western States a bushel of corn can be bought for 40 cents; a bushel of corn will make over 4 gallons of whiskey. Thus the material for a gallon of whiskey costs but about 10 cents, while the expense of making it in a large distillery is another ten cents, the whiskey

being thus produced for 20 cents a gallon. It is put in a bonded warehouse and allowed to remain for three years without payment of any tax, guarded and stored at the government expense without any cost to the distiller. At the end of the three years the mellowed whiskey, which cost 20 cents, is worth from two to three dollars a gallon. The distiller pays 90 cents tax, which, added to the 20 cents for material and making, makes the whiskey cost him \$1.10 a gallon. If he gets \$8 per gallon his profit is \$1.90. But allow him a dollar a gallon of profit and the aggregate profit on the 78,000,000 gallons made every year would be \$78,000,000 for the 900 distilling establishments, or an average of \$75,000 to the establishment—a neat profit.

But the distiller can send his whiskey abroad without paying any tax at all and sell it in foreign markets. If he don't sell it and does not break the package he can bring it back, paying a tax of 90 cents a gallon on its reimportation; when the foreign whiskey has to pay a duty of \$2 a gallon and when it gets here has to pay all the charges of warehouse. Thus the large distiller is protected against the small distiller at home and foreign whiskey abroad.

It is a curious fact that the distillers favor the retention of the 90 cents tax, which works in favor of securing a monopoly in the whiskey business. There are over 4,000 officials and employees in the revenue service. The cost of the system is over \$4,000,000 to the government. In the State of Georgia alone there were over 4,000 men arrested for illicit distillation, and over 2,500 of them convicted and punished. The State of Georgia alone has paid over \$22,000,000 to the government as internal revenue since the war, or \$1,000,000 a year. These are facts brought out by Senator Brown in discussing the revenue system and urging its repeal in a strong speech in the United States Senate. He charges and proves that it is the greatest monopoly in the country. Appendix are some tables giving interesting general statistics of revenue, especially the receipts, distilleries and bushels of grain in each State, with the rank of the States, and also comparative statements of the two last years:

THE RANK OF STATES IN FURNISHING WHISKEY RECEIPTS.

State.	Receipts.	Grain bushels operated.	All distilleries operated.	Grain used. bushels.
1. Illinois.....	\$64,935,704	21	47	5,305,019
2. New York.....	15,101,223	2	66	490,361
3. Ohio.....	13,898,220	28	68	2,781,320
4. Kentucky.....	19,417,559	25	613	4,035,499
5. Pennsylvania.....	8,130,288	89	187	921,323
6. Missouri.....	7,858,789	23	62	753,012
7. New Jersey.....	4,956,161	1	25	371,604
8. Indiana.....	4,259,028	9	62	805,723
9. Wisconsin.....	3,719,064	5	5	929,533
10. Maryland.....	3,875,597	23	32	454,429
11. Virginia.....	3,093,304	30	1,075	88,456
12. Mass.....	3,471,131	1	29	81,006
13. Nebraska.....	2,92,494	2	5	521,407
14. California.....	2,081,221	1	233	94,775
15. N. Carolina.....	1,050,701	307	1,458	284,324
16. Iowa.....	1,051,184	2	8	423,076
17. Michigan.....	1,001,907	...	...	...
18. Tennessee.....	1,012,516	29	262	229,776
19. Minnesota.....	554,088	...	...	...
20. Louisiana.....	543,748	...	...	...
21. W. Virginia.....	538,936	1	114	57,038
22. Connecticut.....	482,405	2	77	22,408
23. New Hampshire.....	377,569	...	5	...
24. Georgia.....	336,705	61	246	50,694
25. Florida.....	322,903	...	...	...
26. Delaware.....	363,9	7	56	...
27. Rhode Island.....	260,154	1	...	...
28. Kansas.....	226,231	...	...	...
29. Texas.....	211,190	2	3	8,831
30. Oregon.....	209,346	3	7	2,519
31. Montana.....	129,318	1	18	1,967
32. S. Carolina.....	101,158	...	...	...
33. Arkansas.....	100,126	14	29	17,117
34. Alabama.....	97,630	19	37	16,394
35. Nevada.....	78,542	3	59	1,218
36. New Mexico.....	70,419	...	...	...
37. Maine.....	63,362	...	3	...
38. Mississippi.....	50,280	...	...	...
39. Vermont.....	48,068	...	...	...
40. Vermont.....	30,129	...	4	...

REVENUE RECEIPTS.

1886	\$116,908,309	44	1887	\$128,837,301	66
Increase 1887 over 1886 . . . . .	... . . . .	...	Increase	\$9,929,432	...
1886	1887	Decrease	Increase . . . . .	...	...
Spirits	\$69,098,666	66	\$65,889,382	71	\$3,206,294
Fermented Liquors	19,676,731	49	21,092,187	49	\$1,415,456
Tobacco	27,907,356	49	30,108,067	12	2,200,704
Oleom "	733,948	04	733,948	04	0
Miscell "	236,509	64	249,448	39	7,937,70
Spirits . . . . .	...	...	Decrease . . . . .	...	...
Liquors . . . . .	...	...	Liquors . . . . .	...	...
Cost of collection	\$4,065,148	84	\$4,065,148	84	0
Cost of collection . . . . .	...	...	Cost of collection	3-4 percent	...

The Boundless Wealth of North Georgia.

COLUMBUS, GA., Jan. 18, 1888.

Editor Manufacturers' Record:

The MANUFACTURERS' RECORD has done valiant service in defense of the South, and is, no doubt, calculating to do much more in the future. The wonderful showing in the way of manufacturing progress challenges the admiration of the world.

One section, however, of our Southern country, while not by any means overlooked, has not had the conspicuous mention that it deserves. The Piedmont Exposition of 1887 at Atlanta opened the eyes of the world to what North Georgia can do if she tries. The display made by the Richmond & Danville Railroad, the Marietta & North Georgia Railroad, the counties of Floyd, Cobb and others, were only an incident in the capabilities of that section. Take all that section having for its northern line the south boundary lines of Tennessee, South and North Carolina; its east and southeast line the Fugalo river and the Richmond & Danville Railroad; its western line the State road from Atlanta to Chattanooga, you have more than 175 miles square of the finest land in the world. With the exception of coal it has every ore that can be found in the Southern States. But one railroad now touches this immense domain of mineral and timber lands. The Marietta & North Georgia Railroad cuts it nearly in half, and another road now building from Augusta to Chattanooga will again divide it east and west, crossing the Richmond & Danville at Gainesville and the Marietta & North Georgia Railroad somewhere near Ellijay. This being done, we see no reason why that portion of our State does not surpass even the fabulous story of North Alabama. The purest of water, the best of healthy mountain air, all the hardwood timbers known to the South, mountains full of gold, silver, copper, lead, ochre, mica, iron, manganese, and enough marble to build Karnak a million times. Far-seeing capitalists are taking advantage of these prospects and buying up vast areas of these lands. See what the Georgia Marble Co. did in buying for a few thousand dollars a property they value at \$2,000,000. Go the length of the Marietta & North Georgia Railroad and see what vast capabilities there are for other corporations to do the same. Within the past three weeks a wealthy syndicate from the far Northwest quietly slipped in and bought nearly half a county near Ellijay, securing thereby some of the richest gold, iron and silver veins in the United States. The price they paid was a mere bagatelle compared to the value of the land—less than \$1 per acre. There are single lots on this purchase worth more than they paid for the entire 50,000 acres, and endless forests of valuable timber, beautiful valleys for farming, and water in great abundance. While this was being done another party of Englishmen scooped up a valuable gold bed in the vicinity of Dahlonega for a few thousand dollars. Report says that gold has been found as high as \$250 per ton: copper mines as rich as any in the world; ochre equal in value the finest French ochre; lead, mica and talc in quantities incredible, to say nothing of the iron and manganese, which are inexhaustible. But it is not so much to its ores as to its hardwoods to which we call your attention. Your readers are already apprised of the change of ownership in Port Royal, S. C. Here is the key to the whole question, for in that plan is the idea of the railroad from Augusta to Chattanooga. With that road running, we have a straight line from Memphis to the Atlantic, taking the cotton from the Mississippi delta, the iron from Decatur, Chattanooga and Northwest

Georgia, through to deep water in a straight line. Better than all this is the outlet it will give for all the valuable hard woods in the upper counties of Georgia. Her hills and valleys are heavily covered with every known valuable timber. But her wealth lies in her oak, hickory, poplar, gum, cherry, walnut, maple, chestnut, beech, elms, spruce, &c. With a straight pull to Port Royal, Savannah and Charleston, they can be put down in Europe and Great Britain at less cost than from any point in America. The nearness to deep water is what is giving to South Georgia to day her timber trade. There are no hard woods to day as near to Europe as those in North Georgia, and yet these precious acres are every day being grabbed up by syndicates at less than \$2 per acre. On many of these acres there are 50 trees of hard wood worth two to five dollars apiece in building a ship or fine furniture. We have seen oak, hickory and poplar trees large enough to square two feet a length of 40 feet, and by the simplest calculation you can see such a tree is worth from five to ten dollars, according to species. The population inhabitating these northern counties are, as a rule, poor people. They have held their lands so long and waited so anxiously for the coming of developments, they are anxious to sell. Three dollars per acre will buy the best of these forests. A few thousands will buy the richest of these mines. The woods are full of investors quietly looking about and taking up the choicest tracts, and before another decade the wealth of this garden spot will have passed into their hands, and we will all wonder why we did not see it. When you can buy an acre of land for the price of four cigars, it is no fraud to ask a stranger to come and buy. Knowing the willingness of the MANUFACTURERS' RECORD to "speak out in meeting," we feel that we can confidently count on you to speak a good word for this neglected section of Georgia. While the Piedmont Exposition did a lasting service to the State and county, not enough emphasis was put upon the particular section described in our opening lines. We know of one enterprising company who are proposing to sell every other alternate lot of their immense tract of land in Fannin and Gilmer counties at \$2 per acre, and give long time to pay it. We know of immense blocks of marble ten times as large as St Peter's, at Rome. We know of hillsides so thickly covered with iron boulders you can barely scramble over them. Yet you rarely ever hear of North Georgia. She will be heard, however. Let the MANUFACTURERS' RECORD hear her cries.

J. A. WALKER.

ONE of the most beautiful books ever printed in the South, and we think probably the finest of the kind ever issued in the country, is the magnificent work entitled "The City of Louisville and a Glimpse of Kentucky." This volume is issued by the Board of Trade Committee on Industrial and Commercial Improvement, of which Mr. Young E. Allison is the secretary. It is for free distribution and must do Louisville an immense amount of good. The success of Mr. Allison in pushing Louisville to the front has been somewhat phenomenal and demonstrates what a man of tireless energy and fertility of resource can accomplish. Would that every city in the South had such a man, and that their business men, like Louisville's, were ready to back him up with the money to advertise the town. We believe Louisville raised about \$15,000 or \$20,000 for this purpose last year.

Iron Industry in Olden Times in a Tennessee County.

SHOWNS CROSS ROADS, TENN., }
January 14, 1888. }

Editor Manufacturers' Record:

Johnson county is the most eastern county in the State of Tennessee, and joins Watauga and Ashe counties, North Carolina, and Greysom and Washington counties, Virginia. This county is diversified with hills and mountains, but not so rugged as the hills and mountains of Western North Carolina. The Stone, the Doe, the Ion and the Holston mountains are the principal ranges, and run parallel with each other in a northeast and southwest direction. Beautiful valleys of considerable size intervene between these ranges, the largest being the valley of Roan creek, which is about twenty miles long and in places from one to two miles wide. The soil is very fertile and produces abundantly of all kinds of grain. The valleys of Doe and Laurel are also very fine for agricultural purposes. The streams all run westward, except Laurel, which runs north and empties in the Holston (Hoghega) near Damascus, Va., a proposed iron manufacturing city. All these streams offer fine water power sufficient to drive most any kind of machinery, some of which have been in use for a great many years in the manufacture of hammered bar iron and blooms. The first of these primitive iron forges built in the State of Tennessee was erected in Johnson county (since taken off of Carter county), on the same site where Dr. R. C. Rhea, iron works now stand. Making iron in this way was once a very profitable and extensive industry in this county, fifteen of these manufacturing establishments being in operation at one time in different parts of the county. The products found ready market up to the beginning of the war. It was very thrilling and animating to a man standing upon the pinnacle of the Doe mountain near the center of the county on a still morning and hear the mighty thunders of fifteen forge hammers all operating at the same time. Just prior to the war, when Hon. L. C. Haynes, of Tennessee, was addressing the citizens of Johnson county upon its wonderful iron resources in connection with a proposed railroad, in a flight of fancy he said: "The music of the spindles would be heard in the valleys and the loud blows of the forge hammer would echo to the thunders of the passing steam car." But alas, the hopes that he inspired in the minds of this people have long since vanished like an idle dream, and the most of these forges have vanished with it; and the moss-covered stacks stand as monuments to the enterprise and industry of our fathers, and the snake and the owl and the bat now find a hiding-place where the blast once roared and the crude ores were smelted. These immense deposits of ores are still awaiting the railroad and the skillful hand of the modern steel and iron master. These ores are of the brown hematite species and of fine quality, and disseminated throughout the entire county; not a farm or a tract of land in the county of any size but what show more or less outcroppe of these ores. The quantity is immense and is deposited in every hill and mountain and in many places apparently inexhaustible. No excavations of any depth have ever been made, but all the ores used by the primitive iron masters were taken from the surface or very few feet under ground. The vast amount that must be deposited here is beyond all human conception. No county in Tennessee can compare with it as to the quantity and quality of her ores. One tract of iron property of about 8,000 acres, lying on Doe mountain between the valley of Roan creek and Doe creek, to which I would call special attention. This prop-

erty belongs to Mr. N. J. Wagner, of Mountain City, Tenn., and is very desirable to purchasers. In addition to the immense deposits of iron on this tract, heavy veins of manganese have been recently developed, which appears to be of very fine grade. This property is located within from fifteen to twenty miles of Damascus, Va., and from twenty to twenty-five miles of Elizabethton, Tenn., and about the same to Bristol, Tenn., with practicable route for railroad to either point. This property, with other good property here, is for sale at almost nominal price. There are now prospects of railroads at an early date penetrating this vast field of undeveloped mineral wealth; also where impenetrable forests of fine timber abound and where the soil is productive of all the cereals, grasses and fruits of this latitude; where flow crystal streams from mountain gorges, pure and limpid; where mountain scenery is grand and sublime; where cold springs of pure water, like so many health-giving tides, burst forth from the hillsides. The atmosphere is salubrious and healthful. The people are intelligent, refined, hospitable and temperate. There is no country superior to this as a summer resort. It is truly the "Land of the Sky." No country beneath the sun offers greater inducements to the capitalist, the manufacturer and the visitor than this God given country of ours.

ISAAC DOUGHERTY.

Where to Look to Find a Good Thing.

COLUMBUS, GA., Jan. 10, 1888.

Editor Manufacturers' Record:

The Franziska Mining Co. was formed in November. We have applied for charter and bought machinery for the mining of yellow ochre on the Marietta & North Georgia Railroad, in Pickens county. This company is composed of Walker Bros., real estate brokers, of this city, and Kristian Korigard, of Minneapolis, Minn., who own the entire property and will develop the property at once. This company also recently purchased 30,000 acres of timber and mineral lands in North Georgia, in Fannin and Murray counties, which they will develop at once, or sell. Through the judicious mentioning of our operations in your popular journal we have already had applications for the entire output of our ochre mine, although we have not begun work. This only shows that when the public wants to find a good thing they look in the MANUFACTURERS' RECORD. We thank you and your excellent Southern correspondent, Mr. Helper for the substantial aid you are giving to our Southern country. No matter what you may say about the advantages of our country, it is better still. Its wealth of soil, climate, timber, minerals and good will are not to be measured by words. We welcome every good man and woman, and wish the MANUFACTURERS' RECORD unbounded success.

WALKER BROS.

A Good Point for Factories.

WEST POINT, VA., Jan. 10, 1888.

Editor Manufacturers' Record:

In the advertising columns of your paper I notice you publish an ordinance from West Point, Va., that the town will exempt all manufacturing enterprises of every kind from taxation. The council mean what they say about this, as there are enterprises here that pay no taxes for corporate purposes. West Point has a population of about 3,000. In 1880 her population was 600. The increase has been steady but rapid. The prices of real estate have doubled in the past two years. Over \$20,000 changed hands for real estate in 1887. There are two very large cotton compresses here which work a greater portion of the year, giving employment to from 125 to 150 hands. A new planing and saw mill has recently been built. There are several oyster packing establishments, an electric light and power company, a hosiery factory and several other enterprises.

The purchase of the East Tennessee, Virginia & Georgia Railroad Co. by the Richmond & Danville will bring a large quantity of cotton here from the Southern States, and West Point will be a large cotton shipping port. She now ranks sixth in the United States as a cotton port. The educational advantages here are unusually good. We have two large female seminaries. The public free schools are well provided for and under the control of experienced and accomplished teachers; besides there are several private schools in the town. The people and the town authorities both are anxious to see new enterprises come into our midst, and all strangers may be assured that they will be well received and courteously treated by the citizens of West Point. To manufacturers let me say that West Point affords peculiar shipping advantages. Freight is cheap, being made so by the number of steamship lines which ply between this port and Northern cities. Fuel can be obtained easily and at small cost. Labor is abundant and cheap. Thousands of people in the adjoining counties are just spoiling for a job, and the manufacturer will find everything to his advantage.

ISAAC DUGGERTY.

A Change in Policy

"Fall River manufacturers, in discussing the labor situation and the outlook for a peaceable culmination of the agitation now in progress on the wage question," says the Providence Journal, "called attention to the change which has gradually been made in mill machinery and which eventually is destined, it is believed, to free them from much of the trouble to which they are subjected. It may not be generally known that, in Fall River at least, mule spinning is slowly but surely becoming a process of the past. For the last seven years improvements in nearly all the factories have included, among other things, the substitution of frame for mule spinning. The old mules are thrown out, and the space they occupied is taken by frame spindles. So far as the latter are now in use, they may be said to be entirely devoted to warp spinning, though in two or three factories they are employed upon both warp and filling. The prejudice which agents first entertained against this innovation has disappeared, and it has been found by experience that the comparatively new method is superior to the old in every particular. There is less waste, and no higher grades of cotton than those commonly purchased here are required. The following figures, prepared by members of the Board of Trade, show the change which has been made in this direction from 1880 to 1886: In 1880 there were 779 mule spinners employed in the city. The number of mule spindles was 978,228, and the frame spindles numbered 213,332. In 1886 there were 734 mule spinners at work, and the number of mule spindles in operation was 911,232, a falling off of 66,996 spindles, despite the large increase in the plant for a period of six years. But the tendency to put in frame spindles is more clearly indicated by the fact that the number of frame spindles in 1886 was 688,292, 474,960 more than in 1880, or over three times as many in 1886. The improvements made during the past year, notably at the Granite and Mechanics' Mills, would still further add to the number of frames. The treasurers affirm that they have been led to make this substitution for mule spinning mainly because of the attitude assumed by the members of the Spinners' Union. As now constituted, the latter organization is in

a position to dictate terms, not only to the manufacturers, but to all the other operatives of the city. The weavers may be willing and anxious to continue work, but everything depends upon the action taken by the Union, and if its decree says the machinery must be stopped, all hands are obliged to fall into line. The frame spinners are operated by young men and girls, and serious strikes have thus far been out of the question in factories which are independent of mule spinners."

Heavy Universal Milling Machine.

The Universal Milling Machine which we illustrate admits of a greater range of work, and the manufacturers say "it will do work that can be done on no other Universal

long, and provided with easy means of adjustment for wear. The front end of the spindle is threaded on the outside for face plates or face mills. In the spindle is a taper hole for cutter arbors 2 inches diameter at the front end, diminishing, $\frac{1}{2}$ inch in 12 inches, to 1 1-16 inches diameter, through which the arbors are driven out by a rammer.

The cutter arbor supporting bar, with its adjustable center, can be moved out to support cutter arbors 26 inches from the end of the spindle or pushed back out of the way, thus facilitating the milling or boring of a large piece of work that would be prevented by the ordinary fixed bar.

The three feeds, vertical, horizontal (in line with spindle), and transverse (at right angles to spindle), are all reversible, and are operated or stopped altogether by the han-

knee. A vertical stud passes upward to the long screw in the platen, and is connected to it by clutch mitre wheels. The screw in the platen is splined, and can be engaged or disengaged by a clutch lever, not shown in the cut, but convenient to the operator. In addition, there is an automatic stop for the horizontal feed, useful for boring. These stops can be set at any point.

The platen is 48 inches long, 14 inches wide, and has three slots for $\frac{1}{4}$ -inch bolts on the top, and on the edges two slots. The latter are very useful and convenient. The platen has a transverse feed of 36 inches and a horizontal feed of 12 inches. It can be turned completely around and fed in line with the spindle. It has an automatic stop while feeding in either direction, and is secured by four $\frac{1}{4}$ -inch bolts in the swivel base, of easy access with a wrench.



HEAVY UNIVERSAL MILLING MACHINE.

milling machine." It is specially designed for use in railroad shops, and for builders of locomotives, portable and stationary engines. In repairs to locomotives, where duplication of wearing parts is so frequent, it is particularly valuable on account of its great capacity. For machine tool builders and general machine shops it is very valuable, as work can, it is said, be done to better advantage and with greater precision than on planers, lathes, shapers, etc.

The gearing is internal, all running parts having oil tubes and being accessible for oiling. This machine is back-gearied, 4 to 1, and is driven by a $\frac{3}{4}$ -inch belt on a 4-step cone, of which the largest diameter is 13 inches.

The spindle is of steel and runs in Atlas bronze boxes. The front bearing is $\frac{3}{4}$ inches in diameter by 6 inches long; back bearing 2 9-16 inches diameter by 5 inches

idle shown in the cut near the cup-board board. This reversing device is common to engine lathes; does away with the crossing of belts and saves time. The 4 step cone on the spindle belts to the lower cone, the shaft of which runs in a hollow stud and drives, by means of the reversing device referred to above, a shaft running through the base of the column. Bevel gears connect this shaft with the vertical shaft, and the latter by bevel gears with the horizontal shaft in the knee, which communicates in turn with the several screws for the various feeds in the front of the knee by clutch gears. These clutch gears can be engaged or disengaged at will by the knurled knobs shown in front, giving a vertical or horizontal feed. The platen feed is operated from the upper shaft in the knee by means of a pair of mitre wheels running in a bearing which is a part of the platen slide on the

knee. The knee is so designed and constructed as to withstand all strains liable to be brought upon it. It is gibbed, with a loose gib on the face of the column, gripped with four $\frac{1}{4}$ -inch stud bolts, and has a bearing 24 inches long and 14 inches wide. In addition, there are two slots, running the whole length of the column, for $\frac{1}{4}$ inch bolts. The two bolts in these slots secure the knee to the face of the column, making it absolutely rigid.

The feed gearing is well protected from dirt, and the mechanism not liable to disarrangement. All gears are of steel, while the bevel gears are cut theoretically correct. The screws are also of steel and accurately cut. The dials read in decimals, or divided by 2, 4, 8, etc., enabling any measurement to be made. Weight of machine about 6,000 pounds. The manufacturers are Pedrick & Ayer, 1025 Hamilton street, Philadelphia, Pa.

The "Queen City" Press.

The accompanying illustrations show the "Queen City" press ready for use, and when taken apart to be cleaned. This press is adapted to many uses, and will be found very valuable to hotels, restaurants and druggists, for pressing berries, fruits, vege-



FIG. 1.

tables, meats, tinctures, etc., as well as in families. The manufacturers make the following broad claims for it:

"The best press known for jelly, wine, catsup, lard, cheese, corned beef, etc.

Extra strong iron stand and frame. More easily cleaned than any other.

The only press that requires no fastening.



FIG. 2.

The only press having so powerful a screw.

The only press that has brass for screw to work through, so that it cannot rust. Other presses have the screws run through cast-iron, and threads are liable to break and soon wear out.

'Queen City' press is galvanized, and the cylinder retinned.



FIG. 3.



FIG. 4.



FIG. 5.

The only press that has legs long enough to admit a large pan being put under to hold material or juice.

The only press so constructed as to have tension continue for a long time after the operator stops turning the screw."

This press is manufactured by the Shepard Hardware Co., of Buffalo, N. Y.

SHEFFIELD

COLBERT COUNTY, ALA.

The Iron Manufacturing Center of the South.

BEING at the *head of navigation*, and on the *south bank* of the Tennessee river, Sheffield is the *natural outlet* for the mineral and manufacturing products of Alabama and neighboring States seeking a water route to points on the Ohio and Mississippi rivers, and to the Gulf of Mexico, as well as the best *distributing point* over Alabama, Eastern Mississippi and East Tennessee, South Carolina, Georgia and Florida for Northern and Western produce, groceries, provisions, machinery, &c. *Four railroads* certain, and several others assured. *Principal shops of Memphis & Charleston Railroad* will be erected here pursuant to written contract. These will employ between *four hundred and five hundred mechanics*, and consequently, with their families, will make an increase in population of at least two thousand people. Shops of three other railroads are contracted to be located here.

* Five Blast Furnaces Now Under Construction, *

Of which one is nearly finished, and the remaining four contracted to completion next spring, have estimated capacity of 700 tons pig iron per day. This is 40 per cent. more than now manufactured at Birmingham, Alabama. Experts do not hesitate to say that *iron can be manufactured more cheaply* at Sheffield than at Birmingham, and its *river transportation facilities* will enable Sheffield iron to reach the principal markets at a saving of from

\$2.00 TO \$2.50 PER TON.

A first-class semi-weekly newspaper, printed by steam, is regularly issued. Furniture Factory, Bottling Works, Bakery, 3 Steam Brick Works, 2 Hand Brick Works, 2 Steam Wood-Working Establishments, Water Works, 2 Banks, a Savings Bank, and Steam Job Printing Office already in successful operation, and Iron Pipe Works, 15-ton Ice Machine and five-story hotel, with all modern appliances, will be erected. The Cleveland Hotel, Park House and numerous boarding houses furnish accommodations to travelers. Postoffice, Telegraph Office and Express Office already established. Contracts have been made for the early erection of Electric Light Works, Paint Works, Agricultural Implement and Machine Works and Cotton Compress. Large Stove Works, Machine Shops, additional Iron Blast Furnaces, an extensive Charcoal and Chemical Plant, a large Rolling Mill and other manufacturing establishments under consideration, and will probably be built shortly.

Good Water. Free Public Schools and Churches. Health and Climate Unsurpassed.

Drainage excellent. Splendid opening for men of *push and energy*. No "Old Fogey" element here.
No better point for *profitable investment*.

Sites for Manufacturing Enterprises, And for Free Public Schools and Churches

Donated by Sheffield Land, Iron & Coal Company.

Population January 1st, 1887, 700; now, (August 21st, 1887,) by actual count, 2,583. Increase of population, 300 per cent. in eight months, and only limited by accommodations.

Three years ago the site of Sheffield was cultivated as corn and cotton plantations, and was without a railroad. Numerous two and three-story brick business houses, and one and two-story dwellings have been, and are being erected. The class of buildings will compare favorably with those in cities of 20,000 inhabitants.

LIMESTONE of excellent quality for *fluxing iron* in unlimited quantities at the furnaces' sites. First-class building stone and brick clay abundant. Rich and extensive deposits of *brown hematite iron ore* within twenty miles, along the lines of two Sheffield railroads. The Sheffield & Birmingham Railroad runs through the heart of the *Warrior Coal Fields*, which abound in first-class *coking, steam, gas and grate coal*. Timber is abundant and cheap.

The *Memphis & Charleston Railroad* and the *Sheffield & Birmingham Railroad* are now in operation into Sheffield. The *Louisville & Nashville Railroad Co.* is now extending its *Nashville, Florence and Sheffield* division, which will be completed to Sheffield before the close of the year 1887. Surveys of three other railroads have been recently completed to Sheffield, which will soon be the *best combined river and railroad transportation center* in the South.

Every merchant and every established manufacturing enterprise is doing a profitable business. *More are needed.* For further information address

ALFRED H. MOSES, Vice-Prest. and Manager

Sheffield Land, Iron & Coal Co., - Sheffield, Ala.

Tuscaloosa, Ala.

* ALABAMA'S NATURAL PITTSBURGH. *

A Railroad AND River Town of 6,000 Inhabitants, in the Coal, Iron AND Timber District.

Healthful Location. Salubrious Climate. School Facilities Unequalled by any other town in the South.

Centre of Education for the State. Seat of University of Alabama. Of State Insane Asylum. Of Alabama Central Female College.

Hill's Female School. Fine Free School. Churches of all Denominations.

+ SITUATED ON +
Queen & Crescent
 — TRUNK LINE, —
 IN THE
Warrior Coal Field
 AND ON THE
WARRIOR RIVER.

Only Navigable River touching the
Alabama Mineral Field.

Night Month Navigation. Being Surveyed
 now to be opened all the year round.
 All Water Navigation to

* MOBILE *
 AND THE
 Entire Gulf and Atlantic Coasts.

THE
 TUSCALOOSA NORTHERN RAILROAD
 Is now under construction into the
 MINERAL AND TIMBER FIELDS.

— THE —
 Macon & Tuscaloosa Railroad
 Will soon be building into the
 COTTON REGION OF MISSISSIPPI.

Fine Farming Region
 Around and Below the City.

Manufacturers Seeking Locations in the South have here

• **THE GOLDEN OPPORTUNITY.** •

Many have availed themselves of it, but such is the wonderful richness of the resources of this section that there is

• ROOM FOR ALL. •

THE TUSCALOOSA COAL, IRON & LAND CO.,

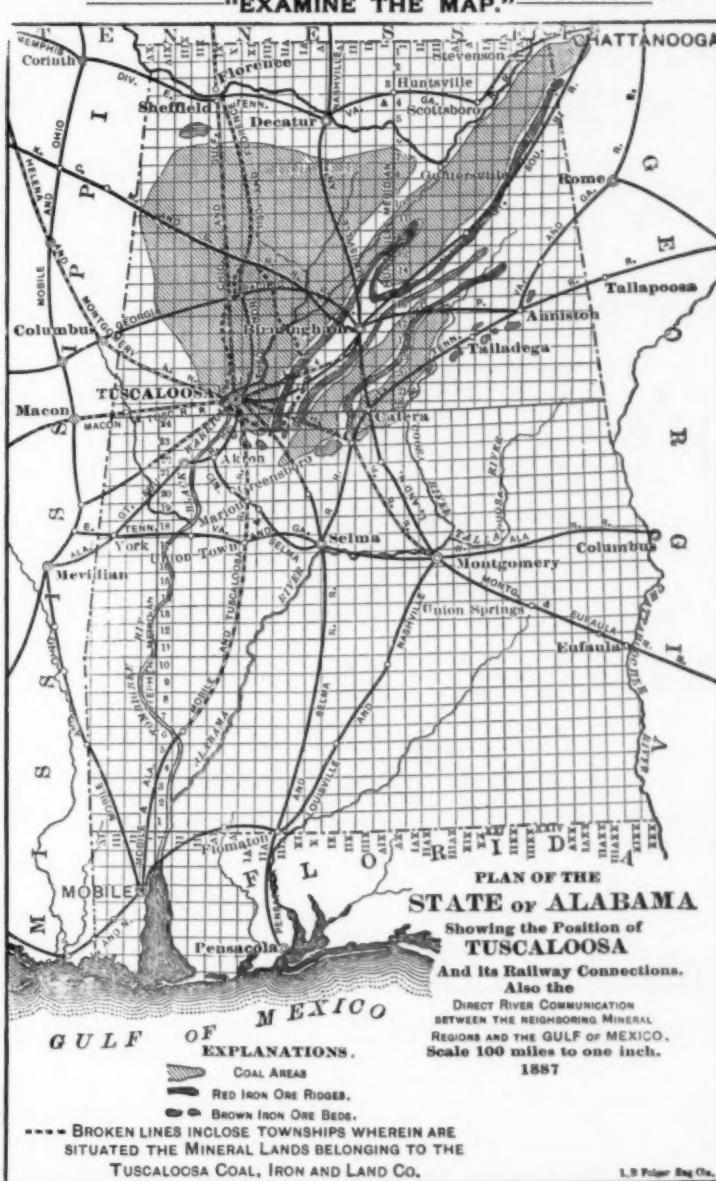
Owning 4,600 acres of city and suburban property, and 40,000 acres of mineral and timber lands, offers liberal inducements to manufacturers to locate at Tuscaloosa, Nature's City, and invites correspondence and the fullest investigation of its claims.

An illustrated descriptive pamphlet sent free upon application to

W. C. JEMISON.

President Tuscaloosa Coal, Iron & Land Co.,

TUSCALOOSA, ALA.



Superior Inducements
AND

+ ADVANTAGES +

TO ALL
 Manufactories Consuming
WOOD, •
IRON,
COTTON.

FINE COOKING COAL

In workable veins near city, fully tested.

• **The Fire Clay** •

Existing in inexhaustible quantities, has been
 practically tested and pronounced
 The Best yet Discovered in the South.

Street Car and Dummy Lines
 NOW BUILDING.

• **Water Works and Electric Lights** •
 TO BE PUT IN AT ONCE.

COTTON MILL
 In Successful Operation.

ALSO
LARGE BRICK WORKS
 COTTON-SEED OIL MILL, &c.

Florence, Ala.

County Seat of Lauderdale County.

At Head of Navigation on Tennessee River, and at Foot of Muscle Shoals Canal,
which will be open Jan. 1st, 1888.

SITUATED on a gently undulating Plateau, 200 feet above high-water mark, surrounded by three large creeks of pure free-stone water. It has a Court House, Two Colleges, Four Public Schools, Six Churches, beautiful wide streets, graded and graveled, and shaded with forest trees; Hotels, fine store houses, Masonic, Odd Fellows, K. of H. and L. of H. lodges. A population of 2,500—moral, social and hospitable.

— The Scenery on Every Side is Picturesque and Beautiful. —

SO MUCH SO THAT IT IS CALLED BY VISITORS

FAIR FLORENCE.”

There is no Place on the Continent more Healthful and Salubrious.

MANUFACTURES.

Within the last six months numerous manufactures have been located here, among the number:

Five Large Blast Furnaces.	One Saw Mill,	One Cotton Mill,	Two Brick Machines and
One Rolling Mill,	One Flour Mill,	One Cotton Compress and Ice	Three Hand-Brick Yards.
Three Planing Mills,	One Wooden-Ware Factory.	Factory.	

There are VAST BEDS OF IRON ORE within a few miles North and
IMMENSE COAL FIELDS SOUTH

ACCESSIBLE BY RAILROADS NOW BEING RAPIDLY CONSTRUCTED.

By the 1st of January the Nashville & Florence Railroad will be completed, making three lines of railroad, and the river, thus opening up VAST AREAS OF TIMBER, IRON ORE, COAL, Marble, Limestone, Kaolin, Fire-Clay, and almost every kind of mineral and product.

THE LANDS IN THE SURROUNDING COUNTRY ARE FERTILE AND PRODUCTIVE.

All kinds of Grain, Grasses and Fruits grow to perfection. Springs and Water Courses are numerous, and grazing for Cattle is abundant for eight months of the year.

Pamphlets and maps furnished on application to

Florence Land, Mining & Manufacturing Company.

GADSDEN, ALA.

Is situated on the West Bank of the COOSA RIVER, in the midst of the

RICHEST IRON AND TIMBER SECTION

IN THE FAVORED STATE OF ALABAMA.

→ The Gadsden Land and Improvement Company ←

Own large tract of Eligibly Located Residence Property in the Most Desirable Part of the City, and have fine location on river and railroad for

MANUFACTURING ESTABLISHMENTS,

And are offering great inducements to manufacturers to locate their plants in this *FAVORED LOCALITY*. No place in the South has such **Wonderful Advantages**. Situated in the midst of the *RICHEST IRON SECTION in the STATE*, at the foot of Lookout Mountain on the banks of a Navigable River, (*THE BEAUTIFUL COOSA*.) surrounded by Forests of the Finest Timber on the Continent, with Fine Building and Fire Clay, and the *FINEST BUILDING STONE* all around us, with

Uninterrupted Health, and the Purest and Best Water and Finest Drainage of any City in the State,

Gadsden should become the Greatest Manufacturing Center of Alabama.

THE Alabama Great Southern, Rome & Decatur, Tennessee & Coosa, Anniston & Cincinnati Railroads, with the ever-flowing Coosa navigable the year round, gives us as *FINE TRANSPORTATION FACILITIES* as any other city enjoys.

We now have Railroad Car Works, Furnaces, Foundry and Machine Works, Saw Mills, Sash, Door and Blind Factory, Furniture Factory, Ice Factory, Paint Mills, Crist and Flouring Mills, Cotton Cinnery, Fine System of Water Works, Electric Lights, Telephone Communication over City, and also to neighboring cities Atlanta and Rome, Ga.

WE WANT Rolling Mills, Bridge and Bolt Works, Cotton Factories, Woolen Mills, Furniture Factories, in fact all kinds of Factories, even Coffin Factories, (but we want to ship the Coffins to some of the other booming cities.)

Liberal Grants of Land will be made by THE GADSDEN LAND AND IMPROVEMENT CO. to any of the above-named industries.

FOR FURTHER PARTICULARS ADDRESS

M. L. FOSTER, Sec. & Treas.

THE GADSDEN LAND & IMPROVEMENT CO. - - - GADSDEN, ALA.

POST-OFFICE BOX 145.

ANNISTON, ALA.

"The Model City of the South."

THREE is no healthier or more charming place of residence in America than Anniston; built on the slope of one of the highest of the chain of the Blue Ridge in Alabama, it commands scenery that is unapproachable in the State. Nature could not have formed a more beautiful place for man to build a city or given greater natural advantages. The natural drainage is most thorough and complete, while in addition the city is preparing a system of underground sewerage. *A more delightful and invigorating climate cannot be found anywhere: mild in winter, cool in summer, a thousand feet above the Gulf, with the high and broken chain, range after range in the east, Blue Mountain in the north, Coldwater Mountain in the southwest, make Anniston the coolest, healthiest and most attractive of any city in the South.* It has the richest agricultural country surrounding and tributary to it in the State, to support a manufacturing and mercantile population. The mountain sides will grow the grape and every kind of large and small fruit to perfection, and the valleys every product of diversified farming. *It is in the heart of the richest mineral district of the South, and commands the great fields of brown hematite ore on which the great and successful manufacture of iron must in the end depend for quality and profit in every branch of most skillful and best manufactures of iron and steel.* It has tributary to it the best and most extensive pine forests in North Alabama, that are reached by roads owned and controlled by Anniston citizens, while it has secured to its industries the very best coal mines and coking coal in Alabama. There is no city in America, in proportion to population, that has the manufactures of Anniston, or employs as many working men, or does a larger mercantile business. The industries already in full and profitable operation in Anniston are the two Woodstock Furnaces producing six hundred tons of Standard Car Wheel and Malleable Iron per week, and the two Clifton Furnaces, tributary to Anniston, producing nearly as much more. The Car Works are fully employed turning out forty cars per week, and are introducing new machinery and larger engines to increase their capacity to twenty cars per day. The Rolling Mill and Car Wheel Foundry and Steam Forge are among the largest in the South, of a capacity of two hundred wheels, a consumption of 120,000 pounds of metal per day, exclusive of the Rolling Mill and Steam Forge. These works are being enlarged to meet the increasing demands upon them. The Cotton Factory is one of the largest in the South, containing 11,700 spindles, and is running to its full capacity, while the foundry of Murray & Stevenson, and machine shop of Pindar & Co., and planing mills of Miller & Smith and Farrar & Co. employ a large number of men and are crowded with work. The new industries that are now under way and provided for will within the next twelve months add four thousand additional working men to Anniston's population. Two of the Largest Iron Furnaces in the South, capable of producing two thousand tons of iron per week, are progressing rapidly, and one of the Largest and most complete Pipe Foundries in the world for the production of Gas and Water Pipe is under construction,—it will employ nine hundred men.



NOBLE STREET—ANNISTON.

The Steel Bloomery, for the production of Steel Blooms, is nearly completed, and the new Fire-Brick Works of Taylor & Sons are in operation. The Ninety-Inch Morse Cotton Compress, with its warehouses, has been completed, and is receiving cotton. Forty thousand bales, it is estimated, will be secured to Anniston from the territory that its system of railroads have opened up. The completion of the Anniston & Cincinnati Railroad during the present year, that will be owned and controlled by Anniston's citizens, opens up new territory and forms a New and Shorter Grand Trunk Line to Cincinnati and the great Northwest, and to the Southwest via New Orleans and Shreveport.

It is only the profits of business and labor that can add to the wealth of a community, add to or maintain the value of real estate, and add to the prosperity of its people. Having this in view, every industry and business in Anniston is established on a profitable basis. All its merchants are doing a large and profitable business, far larger than they prepared for or anticipated; it is the same with the manufacturers, while not a dollar of debt has been created, either by issue of a bond or placing of a mortgage on any of its old or new industries, leaving their earnings free from fixed charges that must be paid in times of depression as well as of prosperity. To the investor, either in business, manufacturing or real estate, nowhere else are presented opportunities as safe, secure and certain as at Anniston, or where they can rest on as healthy and solid foundation. It has trunk line railroad communication with all parts of the United States, and freight rates with the most favored of Southern cities. Two lines of railroads are owned and controlled in the interest of Anniston by its own citizens. It has the best system of Water Works, with the purest well water from three hundred feet below the surface, drawn from white quartz sand and gravel, and distributed through the city, with a pressure of 100 pounds to the inch, from a reservoir always full, protecting the city against fire and giving it the lowest rate of insurance. The city is practically free from debt, and taxation limited to one-half of one per cent. The means for education are the very best. Public Schools of a high grade are provided. One of the finest and best institute for Young Ladies has been opened, and a College for Boys and Young Men, to which a School of Technology and Chemical Assay Laboratory have been added, is now nearly completed, and the best of teachers and professors secured for both. There are Churches for all denominations, and Hotel Accommodations that are not surpassed in Europe or America. The ANNISTON INN provides the quiet and comfort of the most luxurious home. The streets are wide, macadamized, and rolled hard and smooth for pleasant drives. STREET CARS AND DUMMY LINES are being built to different parts of the city, and the ELECTRIC LIGHT service enlarged and improved, leaving nothing undone to promote the comfort of its citizens and maintain and increase the value of their property and profits of their business.

The Anniston City Land Company, or the Bureau of Information, will give any information desired when applied to, and invite all wishing a charming place in which to live, to do business or to make profitable investments, to visit

ANNISTON.

CONSTRUCTION DEPARTMENT.

EPUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.

ALABAMA.

Anniston.—Work will at once be commenced on the buildings for the Barbour Machine Works, lately reported as to be moved from Eufaula to Anniston. The machine shop will be 40x80 feet; foundry 50x100 feet; workshop 40x100 feet; warehouse 50x120 feet, &c.

Anniston.—S. J. Rund is organizing a stock company to establish a vinegar and mineral water factory. He has ordered machinery. A similar factory will be started at South Pittsburg, Tenn., by the company.

Anniston.—George Hanson, of Union Springs, has let contract for a store building on Tenth street.

Anniston.—The Twelfth Street Baptist Church are having plans prepared for a brick or stone church. E. D. Willett can probably give information.

Anniston.—Samuel Noble, D. T. Parker and others have organized the West Anniston Land & Improvement Co.

Anniston.—It is rumored that a company will be organized to build tool works at Anniston, and at Chattanooga, Tenn.

Anniston.—A planing mill will be built at South Anniston by Brock & Gwinn.

Anniston.—Jacob Adams, of Darien, Ga., contemplates erecting a large two-story brick building on Tenth street.

Anniston.—H. M. Pierce, of Nashville, Tenn., has been negotiating for the erection of the charcoal furnace and chemical plant referred to last week, but negotiations have been stopped for the present. Arrangements will probably be made later in the year.

Atalla.—G. W. Frost, of Bristol, Tenn., has been prospecting with a view to starting a shoe factory.

Autaugaville.—The factory reported last week as probably to be put in operation is a cotton factory. Its capacity is 2,200 spindles. James Nunn can give information if anything is done.

Birmingham.—New repair shops have been erected at the Sloss furnaces.

Birmingham.—It is stated that a company will be formed to develop ochre mines in Fayette and other counties.

Birmingham.—Messrs. Oates, of Pelham, will erect a large building on Twentieth street.

Birmingham.—The Winkly Printing Co., R. C. Winkly, manager, have started a printing establishment.

Birmingham.—The Elton Land Co. will greatly enlarge their tack factory which has just been put in operation, and add machinery to manufacture wire nails and pins.

Birmingham.—The Birmingham Tool & Implement Works will hold a meeting February 11 to consider increasing their capital stock to \$200,000.

Birmingham.—The Birmingham-Ensley Land & Improvement Co. have organized the Birmingham-Ensley Building & Loan Association to build houses, &c.

Birmingham.—W. R. King, of Columbus, O., has, it is reported, been prospecting with a view to establishing a fence factory.

Birmingham.—The contract to erect the Powell school building, previously reported, has been let to Mr. Scully at \$38,485.

Birmingham.—The contract to build the 10 miles of turnpike road lately reported has been let to M. G. Kennedy at \$38,927.70.

Birmingham.—Grading has been commenced on the Coal creek extension of the Kansas City, Memphis & Birmingham Railroad.

Birmingham.—The Gamewell Fire & Telegraph Alarm Co., of Richmond, Ind., have contracted to put in a fire-alarm system and have commenced work.

Dadeville.—E. White has purchased and will develop the Parmalle gold mine.

Decatur.—The Alabama Lumber & Fruit Packing Co. is being organized by H. C. Higman, Geo. E. Smith and N. B. Hall, who now have factories at Benton Harbor, Mich., and New Albany, Ind., which will be moved to Decatur and consolidated. Will manufacture fruit boxes, baskets, &c.

Decatur.—Jesse H. Dickson will erect two store buildings.

Decatur.—The Methodist Episcopal Church, Rev. J. G. Johnson, pastor, will build a church.

Decatur.—A cotton mill will probably be built by parties from Lowell, Mass. The Decatur Land, Improvement & Furnace Co. can give particulars when anything is done.

Decatur.—The Chicago parties reported last week as contracting to build gas works to cost \$200,000 will soon begin work. The Decatur Land, Improvement & Furnace Co. can give information.

Fort Payne.—Fire brick and common brick works are to be established by a company now operating at Raleigh, N. C., of which J. D. Whittaker is superintendent.

Girard (P. O. Columbus, Ga.)—There is talk of converting the guano factory into a cotton factory with a capacity of 200 looms.

Leeds.—It is reported that a party is negotiating to establish extensive lime works. If anything is done the Leeds Land & Manufacturing Co. can probably give information.

Leeds.—A street railroad is being agitated. Stewart & Ricketts can probably give information if anything is done.

Lively.—There is talk of a knitting factory being erected.

Livingston.—The report last week that L. M. Foulk, of Aurora, Ind., will build a sash, door and blind factory is incorrect.

Mobile.—John T. Milner, of New Castle, Ala., will, it is reported, erect a saw mill near Mobile.

Mobile.—Robert Middleton will rebuild his cotton pickery reported last week as burned.

Montgomery.—New York capitalists have purchased the Montgomery Southern Railroad and will, it is said, build the road through to Chattahoochee, Fla., at once.

Montgomery.—It is probable that a \$100,000 stock company will be formed to rebuild the Montgomery Flour Mills, previously reported as burned. The proposed daily capacity is 400 barrels.

Montgomery.—It is reported that Walruff & Son are negotiating for the removal of their brewery from Lawrence, Kan., to Montgomery.

Montgomery.—The farmers contemplate organizing a stock company to build a cotton warehouse.

Montgomery.—The Calera Shoe Factory is to be moved from Calera to Montgomery.

Notasulga.—W. D. & J. Barrow will develop the mineral paint on their land. Will want machinery.

Opelika.—L. F. Dickson will erect a store building and wants to purchase an iron front, plate glass, sash, doors, windows, &c.

Opelika.—Z. Hellman will erect a paint mill and wants to purchase machinery for crushing ore and paint and for grinding the same.

Oxanna.—A church will be built by the Cumberland Presbyterian Church, of Anniston.

Selma.—Some new machinery has been put in the Excelsior Bottling Works.

Talladega.—There is talk of building a cotton mill. If anything is done the Talladega Land & Improvement Co. can give particulars.

Troy.—Gellerstedt Bros. will start a clothing factory.

Troy.—The Pike County Guano Co. have increased their capacity and will add a rock and bone mill and acid tanks at once.

Troy.—Water works are being agitated. If anything is done J. M. Henry can probably give information.

Tuscumbia.—The Tuscumbia Contracting Co. has been organized.

ARKANSAS.

Arkadelphia.—The name of the company lately mentioned as being formed to build a cotton mill is the Arkadelphia Cotton Mills. The directors are S. R. McNutt, J. C. Saunders, J. L. Buirne, W. J. Rowe, R. J. Hine, J. W. Garrison and R. F. Cook.

Boonsboro.—A stock company is being formed to start a canning factory by S. T. Cole and others.

Brinkley.—The Batesville & Brinkley Railroad Co. (office, Little Rock) will change their road to standard gauge and build a branch to Portia.

Coal Hill.—Stiwell & Co. contemplate opening new coal mines.

Coal Hill.—The Quita Coal Co. contemplate opening new coal mines soon.

Fort Smith.—The Northwestern Parlor Suite Co., of Chicago, Ill., will build the furniture factory lately reported. They will commence work within 30 days, and will have a capital stock of \$20,000.

Fort Smith.—Bids for building the sewerage system reported last week will be received until February 7 by E. McKenna. The estimated cost is \$150,000. James P. Bates is engineer.

Fort Smith.—F. G. Triesch & Bro. will manufacture cigars.

Hico.—The name of the company reported last week as being organized to erect a canning and evaporating factory is the Hico Canning & Evaporating Co. The capital stock is \$6,000. C. Slagle is president.

Hot Springs.—It is stated that Chicago (Ill.) parties will erect a 40 ton smelting plant and are prospecting for a site. R. R. Waitz can give particulars.

Hot Springs.—It is reported that E. A. Shippey is making arrangements to erect a smelting plant.

Little Rock.—Bryce & O'Kelly will build an iron foundry and have been donated a site.

Little Rock.—Wiegel & Wilson will erect a plant of machinery at their stone quarries.

Little Rock.—A saw factory has been started by George Stringer, of Seymour, Ind.

Little Rock.—Aaron Bales has, it is said, sold 40,000 acres of timber lands.

Monticello.—Efforts are being made to organize a company to start a woolen mill. The capital stock will be about \$10,000. R. F. Hyatt can probably give information.

Portia.—The contract to build a courthouse for Lawrence county has been let to Boone & McGinnis, of Hickman, Ky., at \$9,350.

Prairie Grove.—The capital stock of the company previously reported as being formed to start a canning and evaporating factory is \$25,000. W. R. Irvine is secretary of the company.

Searcy.—The Searcy & West Point Railroad Co. are negotiating for heavier rails for their road and will use steam power.

Thornton.—A church and a school are reported to be built. G. W. Pearson can probably give information.

FLORIDA.

Auburndale.—The Episcopalians will build a college.

Clearwater Harbor.—A saw mill will be erected.

De Funiak Springs.—The Methodists will build a \$4,000 church.

Gainesville.—The building of water works is being discussed. B. C. Drake can give information when anything is done.

Jacksonville.—The Florida Palmetto Works contemplate adding the manufacture of matting and bagging for cotton bales and want to purchase suitable looms.

Ocala.—It is stated that a railroad will be built from Ocala to Lake Apopka, 3 miles, at a cost of \$24,000.

Orlando.—The name of the \$20,000 company lately reported as being formed to raise and manufacture tobacco will be the Orange County Tobacco Planting & Manufacturing Co.

Palatka.—There are prospects of a cigar factory being started. If anything is done the secretary Board of Trade can give information.

St. Augustine.—It is rumored that plans are being prepared for a large opera house to be built probably by H. M. Flagler.

St. Augustine.—A hospital is to be built. The mayor can probably give information.

St. Augustine.—Mears Drysdale and Collee will erect a block of buildings.

St. Augustine.—Mr. Brits will erect a fine residence.

St. Augustine.—Henry M. Flagler will, it is stated, build a church for the Presbyterians.

Tallahassee.—The Tallahassee Gas & Electric Light Co., reported last week as chartered, has a capital stock of \$50,000. They have purchased machinery, but not pipe and fixtures. E. S. Crill is president and W. M. McIntosh, secretary.

Tallahassee.—The Standard Oil Co. will build a warehouse.

Tampa.—Lazinos, Pendos & Co., reported last week as moving their cigar factory from Key West to Tampa, are occupying a temporary factory until they can erect a brick factory.

Tampa.—Mr. Ghira will erect three brick store buildings; B. C. Leonardi, 5 brick store buildings, and A. Ross, 5 brick store buildings.

Tampa.—It is reported that a sewerage system to cost from \$300,000 to \$350,000 is to be constructed. If true the mayor can give information.

Tampa.—The Plant Investment Co. will build an ice factory and a cold storage warehouse.

Tampa.—Negotiations are being made for the removal of one or more cigar factories to Tampa.

MANUFACTURERS' RECORD.

Tampa.—Plans and specifications for the jail reported last week will be received until February 7 by W. F. Givens. It is to be of brick and the cost is not to exceed \$15,000.

Titusville.—It is stated that the ice factory previously reported as probably to be erected will be built.

GEORGIA.

Albany.—J. Regand is preparing to establish a moulting factory.

Americus.—Thorton F. Morrison contemplates starting a canning factory, and wants to purchase machinery.

Athens.—Gant & Stovall will add a job office to their printing establishment.

Athens.—The Bloomfield Water Power Co. have ordered machinery for their 5,000 spindle yarn mill previously reported.

Atlanta.—The Atlanta Granite Co. and the Southern Granite Co. will consolidate.

Atlanta.—Atlanta reports claim that the Southern Car Works, of Knoxville, Tenn., contemplate moving to Atlanta.

Atlanta.—The Atlanta Journal Co., lately reported as increasing their capital stock from \$15,000 to \$50,000, will put in a new Hoe press.

Augusta.—The Atlantic Coast Line have commenced surveys at Augusta for their railroad previously reported. They are building under the charter granted to the Manchester & Augusta Railroad.

Augusta.—Jesse Thompson has prepared plans for a block of five store buildings, and contractors are now bidding on the work.

Augusta.—The Augusta Theatre Co. have let the contract for building their theatre, previously reported, to Charles B. Allen. He will commence work at once.

Augusta.—W. H. Doughty, Sr., R. P. Sibley, C. W. Doughty and P. C. Close have incorporated the Close Health Protecting Fertilizer Co. to manufacture fertilizers from human excrement. The capital stock is \$100,000.

Boston.—S. G. Culpepper will move his lumber mill to Boston and build a tram railroad.

Brunswick.—H. B. Plant, of New York, president of the Plant Investment Co., which recently purchased the Brunswick & Western Railway, states that \$600,000 will be spent in the improvements previously reported. Will build a new passenger depot at Brunswick.

Brunswick.—There are prospects of one or two manufactures being started by parties in Savannah.

Brunswick.—An opera house to cost \$20,000 will probably be built. Plans are being prepared.

Canton.—R. L. Gaines will erect a planing mill and a blacksmith shop, and probably other machinery.

Canton.—There are prospects of a large marble mill being erected in the near future.

Cartersville.—The city council contemplate building water works, and have instructed a committee to employ an engineer to make surveys, estimates, etc.

Cartersville.—The Central Mining Co. have leased manganese iron ore lands from the Etowah Mining & Manufacturing Co., and will develop. The company will build a branch railroad.

Cedartown.—The contract to erect a school building has been conditionally let to Clay Bros. at \$5,500.

Cedartown.—It is rumored that the Chattoohoochee Brick Co., of Atlanta, have purchased a site to establish branch brick works.

Chauncey.—The Normandale Lumber Co. will change their railroad from narrow to standard gauge.

Covington.—There is talk of a company being formed to erect a cotton compress, a cotton-seed oil mill and a guano factory.

Dawsonville.—Beard & Rickman have started a printing establishment.

Eatonton.—A stock company has been formed to publish a paper, etc. J. B. Reese is manager.

Gainesville.—A cotton compress and a furniture factory are reported to be erected. If true, J. R. Banks can give particulars.

Gainesville.—A hotel is reported to be built by parties from Orlando, Fla.

Griswoldville.—It is reported that J. P. Van Buren will develop his kaolin land and manufacture fire-brick.

Hartwell.—A grist mill will be built near Hartwell by F. B. Hodges.

High Shoals.—It is rumored that Joseph Coates, Philadelphia, Pa., will build a thread mill at the High Shoals.

Macon.—The Thompson-Houston Electric Light Co. have asked for a permit to erect an electric light plant.

McDonough.—Speer & Turner have put some new machinery in their printing establishment.

Milledgeville.—The Methodists will build a new church.

Priors.—D. B. Hamilton, Alfred S. Hamilton, D. B. Hamilton, Jr., Harper Hamilton and associates have incorporated the Etna Furnace Co., capital stock \$30,000, to operate the Etna furnace, lately reported as being put in blast.

Puckett Station.—Camp & Cureton have purchased machinery to manufacture crates, boxes, etc.

Quitman.—It is stated that a canning factory will be established before spring.

Quitman.—A large brick warehouse is to be built.

Rome.—J. P. Rounsville, Max Meyerhardt, J. King, J. D. Moore, H. B. Parks, F. W. Quarles, Sr., and L. A. Dean are the directors of the building and loan association reported last week as being organized.

Rome.—20 new looms are being added to the Rome Cotton Factory.

Savannah.—The Chatham Machine Brick Co. has been organized to establish brick works, with Edward Lovell as president. Machinery has been ordered.

Savannah.—The Central Railroad & Banking Co. have purchased the property and franchises of the Savannah, Dublin & Western Railroad Co., and will complete a part of the road, if not all.

Savannah.—Samuel J. Whiteside, J. F. Cavanaugh and Louis P. Hart have chartered the Savannah Ice Delivery Co., capital stock \$20,000, to manufacture ice, etc.

Trion Factory.—The Trion Manufacturing Co., lately mentioned as to double the capacity of their cotton factory as soon as the Chattanooga, Rome & Columbus Railroad is completed, contemplate at present changing about one-half their spindles (8,458) to the Whitin gravity spindle, adding some cards and other card machines. Have put in automatic sprinklers.

Valdosta.—The city council contemplate building a city hall, engine and market-house.

Vienna.—It is reported that several saw mills have lately been started near Vienna.

Washington.—James A. Benson will erect a bank building.

Waterville.—Terra cotta works are reported as being erected.

West Point.—The Union Milling & Manufacturing Co. will double the capacity of their flour mill.

West Point.—There is talk of building a railroad from West Point to Columbus to develop the water power of the Chattahoochee river.

West Point.—The Baptists contemplate building a church. The Catholics will also build a church.

KENTUCKY.

Carrollton.—A flour mill is being agitated.

Fordsville.—The Louisville, St. Louis & Texas Railroad Co. (office, Memphis, Tenn.) have made surveys for a branch railroad to Fordsville.

Frankfort.—Bills have been introduced in the legislature to incorporate the Clifton & Reservoir Park Railroad Co., with a capital stock of not less than \$50,000, and John Dresher, John Colter, J. G. Doyle, S. S. Hite and Joseph Huffaker as corporators; the Germania Safety Vault & Trust Co. (Louisville); the Traders' & Builders' Association (Louisville), with J. M. Murphy and others as corporators; the Somerset, Rockcastle Springs & Eastern Kentucky Railway Co., and the Paducah & Hickman Railroad Co.

Hawesville.—Clark Bros., of Cannelton, have leased and will develop coal lands. Are preparing to begin work.

Hopkinsville.—F. L. Ellis & Co. will at once build a 10 ton ice factory.

Lexington.—The Diamond Oil Co., previously reported, have organized with S. G. Sharp as president; Andrew Campbell, secretary, and Watts Parker, treasurer. Will soon begin boring for oil.

Louisville.—The Kentucky Wagon Manufacturing Co. will early in the spring begin work on the buildings proper for their large new factory previously reported. The work shops will be 160x900 feet, boiler and machine room 48x120 feet. Will put in electric lights. The machinery will cost \$35,000.

Louisville.—The Standard Coal & Mineral Co. will develop a part of their coal lands in Western Kentucky. J. T. Gathwright can give information.

Winchester.—Crapsey & Brown, of Cincinnati, O., have prepared plans for the Winchester M. E. Male College, previously reported. It is to be of brick, three stories, 120x145 feet, with a tower 20 feet square and 160 feet high. The cost will be \$30,000.

LOUISIANA.

New Orleans.—An iron foundry will probably be added to the Tulane Manual Training School.

New Orleans.—The Maginnis Cotton Mills, previously reported as to put in additional machinery, will increase their capital stock from \$500,000 to \$1,000,000, and increase the capacity of their mills from 454 looms and 17,000 spindles to 1,000 looms and 40,000 spindles.

Thibodaux.—The Southern Pacific Railroad Company are building an elevator and a wharf.

MARYLAND.

Baltimore.—The contract to furnish the 2,465 tons of cast-iron pipe, lately reported, has been awarded to the McNeal Pipe & Foundry Co., of Burlington, N. J.

Baltimore.—The Furniture Workers' Cooperative Manufacturing Association will move their factory to a new building corner President and Fawn streets. The building cost \$25,000.

Baltimore.—A bill has been introduced in the legislature at Annapolis to incorporate the Cremation Co., capital stock \$15,000. Benjamin F. Horwitz and John R. Rennous are interested.

Baltimore.—J. W. Sindall will build 24 two-story houses on Hoffman and other streets.

Baltimore.—M. H. Marcus, Central avenue and Bank street, will put in 50 horse-power boiler and engine.

Baltimore.—Henry Schaunberg & Son will erect 16 two-story houses and one three-story house at Charles and Heath streets.

Baltimore.—The Madison Avenue M. E. Church will build a church at Clifton.

Baltimore.—The Catholics contemplate building a church at Steelton, near Baltimore.

Baltimore.—J. E. Simpson, of New York, has been prospecting at Locust Point with a view, it is said, to building a dry dock, wharves, etc.

Baltimore.—The Baltimore Press Publishing Co., capital stock \$15,000, has been organized by A. B. Cunningham, Wm. J. Guard and others to publish a daily paper.

Centreville.—Water works are being agitated.

Chestertown.—Wilbur Eliason has recently put additional machinery in his straw board mill.

Denton.—T. F. Garey, Jr., is preparing to build a roller grist mill.

Ellicott City.—Solomon Hose contemplates establishing cooperage works.

Frederick.—T. R. Crane, of Baltimore, is negotiating to establish an agricultural implement factory.

Point of Rocks.—A bridge will, it is stated, be built across the Potomac river near Point of Rocks. Joseph D. Baker, Frederick, can give information.

Port Deposit.—A stock company is being formed to build the iron foundry reported last week.

Rising Sun.—William P. Addison has lately added a band saw to his lumber mill and contemplates putting in a feed mill.

Salisbury.—The Maryland Steamboat Co., of Baltimore, will spend about \$3,000 in improving their wharf property. The contract has been let to George W. Parsons.

Washington, D. C.—Charles Geessford will erect seven dwellings to cost \$15,000.

Washington, D. C.—George Becker will erect four three-story brick dwellings on E street northwest to cost \$12,000.

Washington, D. C.—A bill has been introduced in the United States Senate to authorize the Capi al, North O Street & South Washington Railroad Co. to increase their capital stock to \$1,500,000.

MISSISSIPPI.

Greenville.—The Greenville Water Works Co. have purchased 5 acres of land for their plant, previously reported.

Greenville.—The Greenville Brick & Improvement Co. will enlarge their brick works, reported last week, and will start the manufacture of tiles and terra cotta.

Jackson.—Bills have been introduced in the legislature to incorporate the Mobile, Hattiesburg & Jackson Railroad Co.; the Edison Electric Light Co. (Greenville), and the Waynesboro, Pascagoula & Gulf Coast Railway Co.

Macon.—Plans for a brick church to cost not more than \$3,500 and a frame church to cost not more than \$2,500 are wanted by Robert C. Paty. Will pay usual commission for plans that are accepted.

Vicksburg.—Mulholland Bros., reported last week as preparing to rebuild their spoke factory and cotton ginnery, will also build a cotton-seed oil mill.

NORTH CAROLINA.

Asheville.—T. H. Lindsey and George H. Ketchen are starting a printing establishment.

Asheville.—A factory is being built by Grant, West & Co.

Charlotte.—More than \$113,000 have been subscribed towards organizing the Enterprise Manufacturing Co. to build the second cotton factory lately reported. J. H. McAden, W. P. Bynum, M. P. Pegram, H. M. Houston and others are interested in the company. The capital stock will probably be \$200,000.

Charlotte.—It is proposed by John Vandenberg, F. L. Alexander and others to form a co-operative company with a capital stock of \$100,000 to build the third cotton factory.

Danville.—Wemple, Ellerson & Co. contemplate enlarging their tobacco factory.

Fayetteville.—A corn mill is being erected by W. O. Lockamy.

Fayetteville.—It is stated that the Cape Fear & Yadkin Valley Railroad Co. will build a new depot.

Forest City.—G. E. Young is working up a company to build a cotton factory.

Franklin.—The Nantahala Marble Co., of Atlanta, Ga., previously reported as purchasing the Jarrett marble property, are preparing to make extensive developments. They will build a \$15,000 marble mill, tenement houses, &c.

Greensboro.—A. C. Burgess & Co. contemplate erecting a small mill for manufacturing yarns and carpet warps at Greensboro or Staley, and want to purchase good second-hand machinery complete for a one set mill.

Monroe.—The capital stock of the company reported last week as to be formed to build a cotton factory will be about \$50,000. Walter J. Boylin can give information.

Nashville.—The Mann-Arrington Mining Co. are receiving the new machinery for developing their gold mines, previously reported.

Newton.—One of the shuttle block factories will be enlarged during the year.

Newton.—The New-on Cotton Mills contemplate adding machinery during the year.

Oxford.—The tobacco prize factory reported last week as to be built by J. T. Rogers will be four or five stories, 75x125 feet. He will erect it next summer.

Pilot Mountain.—A stock company has been formed to build a tobacco warehouse. Work has been commenced.

Raleigh.—The Observer Printing Co. have started a job printing and book-binding establishment.

Raleigh.—I. M. Proctor & Co. have fitted up a new prize factory.

Raleigh.—It is reported that D. C. Hudgins will build a foundry at Millbrook.

Reidsville.—A meeting of citizens is to be held to consider organizing a company to build a cotton factory.

Reidsville.—Richmond & Palmer will start the broom factory reported last week.

Rutherfordton.—A building and loan association, capital stock \$30,000, has been organized, with L. P. Erwin as president, and T. W. Dixon, secretary and treasurer.

Salem.—A saw mill has been erected 2½ miles from Salem by Fishel & Hege.

Salisbury.—An electric light plant will probably be erected soon.

Salisbury.—J. A. Boyden, M. C. Quinn and A. W. Osborne have formed the Salisbury Brick Co. They have purchased a site and machinery, and will erect works at once.

Shelby.—Wilkinson & Fore will soon begin making the improvements to the Cleveland Springs property, previously reported.

Statesville.—Jacob Mendall will move his cigar factory from Charlotte to Statesville.

Statesville.—The company previously reported as being formed to build a cotton factory has, it is stated, been organized. The capital stock is \$100,000. J. P. Caldwell can give information.

Swann's Station.—The kaolin lands reported last week as probably to be developed are owned by William M. Swann. Negotiations for their development are now pending.

Tarboro.—The capacity of the Tarboro Fertilizer Factory has been increased.

Walnut Cove.—A stock company has been formed to build a school. P. W. Allen can give particulars.

Walnut Cove.—The Stokes Manufacturing Co. will probably rebuild their sash and blind factory lately reported as burned.

Wilmington.—Wilmington parties are forming a company to build a railroad to Wrightsville sound.

Wilmington.—E. K. P. Osborne and Mr. Dixon, of Charlotte, contemplate building a street railroad and a dummy railroad from Wilmington to Wrightsville sound, eight miles.

SOUTH CAROLINA.

Beech Island.—The Franklin Kaolin Co. are erecting works and expect to be shipping clay by March. They will enlarge their works in the summer. Thomas J. Danes is president.

Beech Island.—Thomas J. Danes has purchased two tracts of kaolin lands. He is opening up one tract and erecting buildings, etc., to ship clay. The other tract will be developed during the summer.

Beech Island.—A stave and barrel factory has been erected. Thomas J. Danes can give particulars.

Black Mingo.—F. Rhem & Son, reported last week as re-erecting a saw mill on Black river, contemplate soon building a narrow gauge tram railroad.

Charleston.—Oliver & Carter have commenced work on their contract to rebuild the county jail lately reported.

Columbia.—The Richland Building & Loan Association has been organized with John T. Sloan as president; George K. Wright, vice-president, and William Barnwell, secretary and treasurer.

Georgetown.—The address of Ehrich & Twiggs, reported last week as building a saw mill, is Georgetown, and not Aiken.

Greenville.—The Greenville News Co., capital stock \$15,000, is being organized to do a printing and publishing business by John Ferguson, E. A. Smith and others.

Greenville.—Barton & Gilleland will start the manufacture of harness, saddlery, etc.

Mapleton.—The capital of the Mapleton Cotton Mills, owned by Searles & Dallis, will be increased.

Pomaria.—George B. Aull and Theodore N. Kebler will probably start a saw mill.

Summerville.—A company has been chartered to build the hotel reported last week. The capital stock will be about \$20,000 or \$25,000. W. R. Dehon can give information.

TENNESSEE.

Athens.—Mr. R. J. Fisher has been making investigations in regard to erecting a small electric light plant.

Bayless.—B. F. Bashor, of Knoxville, has recently repaired his flour mill at a cost of \$1,200.

Bristol.—J. M. Kunkle, of Pond Gap, Va., has been prospecting with a view to establishing a tannery.

Chattanooga.—It is rumored that a company will be formed at Anniston, Ala., to build tool works at Anniston and at Chattanooga.

Chattanooga.—The Hughes Lumber Co. has been chartered to manufacture agricultural implements, etc., by George E. Drumbar, E. A. Alexander, Robert W. Andrews, Charles Stein and Garnett Andrews.

Chattanooga.—The Hamilton Gas & Oil Co. are preparing to sink another well.

Chattanooga.—The Citizens' Oil & Gas Co. has been organized by O. J. Sheridan and others. The capital stock will be \$150,000. Will sink first well in the Sequatchie valley.

Chattanooga.—Carl G. Thomsen and R. C. Hutchinson will, it is stated, organize a company to build an organ factory.

Chattanooga.—John R. Dean & Co. are corresponding with parties who contemplate establishing an undertakers' hardware factory.

Chattanooga.—The Chattanooga Electric Street Railroad Co., previously reported, have organized with C. A. Lyerly as president; G. N. Henson, vice-president; E. Scott, secretary, and C. V. Brown, treasurer.

Chattanooga.—The Highland Park Land Co. will organize a stock company to build a street railroad.

Chattanooga.—The Chattanooga City Transfer Co., capital stock \$25,000, has been organized with W. H. Hart as president.

Chattanooga.—Amos Tepenpaw will build a \$6,000 residence.

Clarksville.—A stave and heading factory is to be started soon.

Clinton.—A land and improvement company is being organized and the capital stock will probably be \$500,000. S. W. Wilson can probably give information.

Dandridge.—The rumor referred to last week that a woolen mill will be established is not confirmed.

Dayton.—A company is to be formed to erect an electric light plant.

Elizabethhton.—W. B. Carter, reported last week as purchasing some new machinery for his flour mill, is remodeling the mill.

Gallatin.—The Sumner Hotel, burned in March, 1886, is reported to be rebuilt. J. C. Saunders, of Lebanon, can give particulars if true.

Johnson City.—It is stated that a large steam tannery is to be built and that work will be commenced early in the spring. The mayor can probably give information.

Jonesboro.—A. B. Cummings will start a plow factory and wants to purchase a 6 or 8 horse-power upright stationary engine, new or second-hand, and other machinery.

Kingsport.—A. Gibson has improved his saw mill.

Kingston.—Iron ore lands have been purchased by W. B. Hope, J. H. Welcker, W. L. Welcker, W. Wiley and others.

Knoxville.—J. H. Rumbough has purchased a site to build a tobacco factory.

Knoxville.—The Knoxville Cold Storage Warehouse & Wholesale Commission Co. has been formed by H. N. Camp and others.

Knoxville.—The Knoxville Southern Railroad Co. have purchased 63-pound steel rails for 200 miles of their road.

Lebanon.—John H. Freese will start a steam laundry.

Memphis.—William Stewart will rebuild his burned building.

Memphis.—The Brown Tobacco Co., of Montgomery, Mo., are negotiating for the removal of their chewing and smoking tobacco factory to Memphis. If moved, it will be somewhat enlarged.

Memphis.—The Memphis Water Works Co. will greatly extend their mains during the year.

Memphis.—E. L. Estep is improving the Clarendon Hotel and will put in elevator.

Memphis.—The Memphis Brick & Manufacturing Co., previously reported as increasing capital stock, will put in additional machinery.

Memphis.—A saw mill, dry kilns, etc., will be built near Memphis by J. M. Donnell & Son. The daily capacity of the mill will be 40 M feet.

Memphis.—John Averton will erect a block of buildings to cost \$75,000, and R. B. Snowden a block on Second street to cost \$150,000.

Morristown.—Shields Bros. will, it is said, organize a \$100,000 stock company to develop their marble quarries near Morristown.

Mossy Creek.—J. C. Beeler, J. C. Johnson, Arthur Moody, J. W. Mooney, M. H. Peck and others are interested in the \$15,000 stock company reported last week as formed to manufacture woolen yarn. A site has been secured for the mill, and machinery is being purchased.

Mossy Creek.—It is reported that roller machinery has lately been put in the flour mill of S. G. Saunders.

Nashville.—It is rumored that the Louisville & Nashville Railroad Co. contemplate moving their machine shops to another location and enlarging them.

Nashville.—Liebermann, Lovemann & O'Brien, reported last week as purchasing large new engine for their lumber mill, have purchased band saw mill, additional circular saw mill, three new boilers, &c., and built new factory. The improvements cost about \$30,000.

Oliver Springs.—There are prospects of one or more manufactories being started in the spring.

Pelter.—P. Henderson has started the manufacture of wagons.

Pittsburg Landing.—A railroad is projected from Pittsburg Landing to Corinth, Miss.

Shelbyville.—Cross, Adams & Co. contemplate enlarging their foundry and machine works.

Shelbyville.—The Citizens' Bank will erect a brick bank building and are receiving bids.

Shelbyville.—The hub and spoke factory reported last week has been put in operation by Jacob Garrett and John W. Friesen.

South Pittsburg.—A vinegar and mineral water factory is to be started by a stock company being organized at Anniston, Ala., by S. J. Rund.

Tallahoma.—John L. Collins, reported last week as to start a steam laundry, will start it at Lebanon for John H. Freese. Mr. Collins will add some machinery to his present laundry.

TEXAS.

Austin.—J. F. Pope will make surveys for an irrigating canal.

Blanco.—K. R. Seaton, of Sweetwater, is developing a silver mine 12 miles from Blanco.

Brenham.—The electric light plant lately reported will be erected by the Thompson-Houston Electric Light Co., represented by Mr. Richards.

Dallas.—The Dallas Building & Savings Association, capital stock \$500,000, has been organized with W. E. Parry, E. W. Tower, R. S. Munger and others as directors.

Denison.—The North Texas Loan & Trust Co., capital stock \$200,000, has been incorporated by John R. Carr and others.

El Paso.—J. P. Hague and associates have asked for permit to build a street railroad.

El Paso.—William Crosby and associates contemplate erecting ore sampling works.

Fort Worth.—It is stated that the Montana, Kansas & Texas Railroad Co. contemplate building to Fort Worth.

Fort Worth.—The North Fort Worth Street Railway Co. have increased their capital stock to \$300,000.

Fort Worth.—A \$50,000 stock company is being formed to erect a six-story building, 75x100 feet, for the Board of Trade. The cost will be \$100,000. E. E. Chase or E. S. Gard can give particulars.

Fort Worth.—The county commissioners have appropriated \$33,000 for an iron bridge two miles from Fort Worth, \$19,000 for an iron bridge over a slough and a certain sum towards an iron bridge over the Trinity at Fort Worth.

Gainesville.—Brady Bros. will at once rebuild their flour mill reported last week as burned. The capacity will be 200 barrels.

Galveston.—The school trustees have purchased a site for the school building previously reported, but will probably not build at present.

Georgetown.—Plans and specifications for the jail and jailer's residence, reported last week, will be received until February 13 by W. M. Key. The cost is not to exceed \$30,000.

Greenville.—The Texas Compress Association will rebuild their cotton compress previously reported as burned.

MANUFACTURERS' RECORD.

Greenville.—J. M. Cook and Thomas King, of Greenville, and Thomas Howard, Thomas E. Tutt, S. W. Fordyce and others, of St. Louis, Mo., have contracted to build water works.

Hawkins.—T. S. McSpadden will rebuild his saw mill lately reported as burned.

Houson.—William Boyd and associates have received a permit to build a street railroad.

Houston.—The Jenney Electric Light Co., of Fort Wayne, Ind., have contracted to light the city.

Houston.—T. W. Anderson has received permit to erect an electric light plant.

Houston.—W. O. Ellis offers to furnish \$200,000 towards organizing a \$400,000 stock company to build a refrigerator and beef canning establishment if balance is raised at once by other parties.

Huntsville.—Plans for the new courthouse reported last week as to be built by Walker county will be received until February 13 by the county judge. It is to be of brick or stone, and is not to cost more than \$22,500.

Marfa.—J. H. Catlin will develop the Home Stake Silver Mines 30 miles from Marfa.

Marshall.—W. D. Littlefield and others will organize a stock company to erect an electric light plant. Will use the Westinghouse system.

Mexia—A stock company has been formed to start the canning factory lately reported. J. W. Stubenrauch can give information.

Overton.—Alford & McGilvery and Duglis & Co. will start the canning factories lately reported.

San Angelo.—J. D. O'Donnell will build a 20 horse-power planing mill.

Sweetwater.—N. J. Fritz, A. C. Bawcom, S. D. Brannon, D. C. Davis and others have organized the Sweetwater Mining Co. to develop a silver mine.

Temple.—New York parties have been granted a franchise to build water works and street railroads, and erect an electric light plant, and they will, it is said, commence work at once. The mayor can give information.

Tyler.—The Tyler Electric Light Co. have contracted to light the city and will erect a plant.

Tyler.—The Tyler Canning Co. are building a new and larger canning factory, and have purchased machinery to manufacture their cans.

Weatherford.—The Parker County Farmers' Alliance contemplate building a roller flour mill with a daily capacity of from 75 to 100 barrels. S. T. Davis can give information.

VIRGINIA.

Amherst.—It is stated that a stock company will be formed to start a tobacco factory if the tax on tobacco is taken off by the present Congress.

Amherst.—A land improvement company will probably be formed.

Bonsack's.—J. H. Bartlett is sinking a shaft at the Bonsack zinc and silver mine.

Chatham.—A bill has been introduced in the legislature at Richmond to authorize the mayor and council to issue \$5,000 of bonds to build water works. L. H. Pigg can give information.

Clinch River.—A lumber boom is being constructed in the Clinch river.

Crewe.—A hotel is to be built at a cost of \$10,000.

Danville.—It is rumored that H. Sampson & Co. will move their tobacco factory from Reidsville, N. C., to Danville.

Estillville.—Marble quarries are reported to be opened in the spring.

Harrisonburg.—There is talk of forming a stock company to purchase the mill site of Clem & Wenger and establish a woolen mill.

Harrisonburg.—It is reported that the Baltimore & Ohio Railroad Co. (office, Baltimore, Md.) will build machine shops at some point along their Valley Branch. The city council have appointed a committee to negotiate for their location at Harrisonburg.

Lexington.—A stock company will probably be formed to build a grain elevator and operate in connection with it a saw mill, box factory and a can and canning factory.

Lovely Mount.—The Norfolk & Western Railroad Co. (office, Roanoke) have let the contract for the abutments and piers for the bridge across the New river, previously reported, to John Kelley, of Lynchburg.

Lynchburg.—The Glamorgan Co., lately mentioned as to enlarge their machine works during the year, contemplate doing so at an early day.

Lynchburg.—St. Paul's P. E. Church will erect a new stone church on Clay street, corner Seventh, to cost \$50,000 or \$60,000. H. H. Law, of Washington, D. C., has prepared plans. Work will be started early in the spring.

Lynchburg.—The building of a car works plant is being discussed. T. C. Jones can give information if anything is done.

Luray.—The Episcopalians will build a new church.

Mount Jackson.—A creamery is to be started.

Norfolk.—Thomas R. Ballentine will erect a large store and office building. Plans have been prepared.

Pedlar Mills.—A canning factory will probably be started soon.

Portsmouth.—The Portsmouth Record Publishing Co. has been incorporated. The capital stock is to be not less than \$3,000 nor more than \$10,000.

Pulaski City.—An oil well is being sunk on the land of J. J. Trollinger, seven miles from Pulaski City.

Pulaski Station.—J. H. Tyler and others talk of starting a beef packing establishment.

Richmond.—It is reported that Northern parties will put the James River Brewery in operation.

Richmond.—The capital stock of the Richmond & Eltham Railroad & Navigation Co., a bill to incorporate which was reported last week as being introduced in the legislature, is to be not less than \$5,000 nor more than \$5,000,000.

Richmond.—Bills have been introduced in the legislature to incorporate the Virginia Agricultural & Mechanical Society, capital stock \$120,000; the Elizabeth River Navigation Co., with a capital stock of not less than \$25,000 nor more than \$500,000, and Frederick S. Taylor and others as corporators; the Spotsylvania Mining & Manufacturing Co.; the Norfolk Fuel & Gaslight Co. (Norfolk); the Virginia Immigration, Land & Improvement Co. (Fredericksburg), with a capital stock of not less than \$50,000 nor more than \$500,000, and R. S. Mason, Walter S. Phillips and others as corporators; the Fidelity Safe Deposit & Trust Co. (Norfolk); the Roanoke & Franklin Turnpike Co.; the West End Water Co. (Petersburg); the Pocohontas Towing & Transportation Co., with a capital stock of not less than \$20,000 nor more than \$1,000,000, and William Lamb, of Norfolk, and others as corporators, and the Abingdon Railway Co.

Riverville.—Work has lately been resumed at the iron ore mines near Riverville.

Roanoke.—The Home Conveyancing Co. has been chartered to purchase lands and build and sell houses. The capital stock is

to be not less than \$5,000 nor more than \$100,000. R. L. Terry is president.

Staunton.—A grain elevator is projected. J. C. Shields, secretary Chamber of Commerce, solicits correspondence with parties who can furnish plans, estimates, &c. The capacity is to be from 50 to 75 M bushels.

Staunton.—A cigar factory has been started by George H. Haines & Son.

Staunton.—The capital stock of the Augusta Agricultural & Machine Works will be increased.

Tazewell C. H.—N. W. & M. L. Peery contemplate starting a broom factory, and want to purchase all machinery needed except power.

Tazewell C. H.—A canning factory will probably be started soon.

University of Va.—The Board of Visitors of the University of Va. have decided to light the grounds and buildings with electric lights.

Warrenton.—Bethune & Jeffries contemplate starting an apple evaporating factory next autumn.

WEST VIRGINIA.

Beverly.—The Tygarts Valley Boom & Lumber Co. has been incorporated by Thomas A. Bradford, T. P. R. Brown, James A. Bent, L. D. Strader and George W. Leonard, of Beverly, and others. The capital stock is limited to \$150,000.

Charleston.—Robert Bartley, of Washington, Ga., is prospecting with a view to purchasing coal lands.

Falling Waters.—The flour mill of Mrs. E. Z. Stahley, reported last week as burned, will be rebuilt.

Guyandotte.—Stewart Bros. will add to their woolen mill one set cards and spinning machine, twister and blanket loom.

Huntington.—The Davis Flour & Bolt Co. has been chartered to manufacture flour mill machinery by J. L. Caldwell, J. T. Miller, Jr., J. V. Davis, E. B. Ensor and F. B. Ensor. Have purchased machinery. The subscribed capital stock is \$10,000.

Huntington.—The Ohio River Railroad Co. (office, Parkersburg) will build their road to Huntington, erect a freight depot, &c.

Huntington.—A. M. Hambleton will move his marble yard from Catlettsburg, Ky., to Huntington.

Kearneysville.—A creamery is to be started.

Kingwood.—James R. Smoot, of Newburg; A. J. Bonafield, Tunnelton; W. M. O. Dawson, J. A. Martin, William G. Brown and William G. Worley, of Kingwood, and others have incorporated the Kingwood Coke Co. to mine coal, manufacture coke, bricks &c. The capital stock is not to exceed \$50,000.

New Martinsville.—New York and London (Eng.) capitalists are negotiating for 16,200 acres of coal lands in Wetzel county.

New Martinsville.—It is stated that work on the railroad from Fairmont to New Martinsville will be commenced soon. It will be 51 miles long.

Parkersburg.—C. E. Batson, F. E. King, Ina Skervin, M. F. Batson and William E. Skervin have incorporated the Parkersburg Brick & Tile Co. to manufacture bricks, tiles, &c., and engage in merchandising. The authorized capital stock is \$10,000.

Parkersburg.—The Butcher & Beeson Cigar Manufacturing Co. has been incorporated by M. A. Butcher, B. F. Butcher, W. P. Beeson, B. M. Beeson and L. N. Tavener. The capital stock is \$5,000.

Wheeling.—It is reported that the Wheeling Hinge Factory has lately been enlarged.

Wheeling.—The Baltimore & Ohio Railroad Co. will shortly begin double tracking their road from Glenwood to Wheeling.

Wheeling.—The Wheeling & Pittsburgh Junction Railroad Co., capital stock \$50,000, has been incorporated by F. M. Hildebrand, of Baltimore; William M. Clements, Henry M. Russell, M. Reiley, Thomas O'Brien and John G. Hoffman, of Wheeling, and others.

Wilsonia.—L. Levering, reported last week, has lately opened a vein of cannel coal 6 feet in thickness.

BURNED.

Abbeville, La.—The grist mill and gin of John A. Brookshire; loss \$4,000.

Birmingham, Ala.—The furniture factory of Morris & Norton.

Denison, Texas.—The round house of the Missouri Pacific Railroad Co.; loss \$100,000.

Farmersville, La.—The saw mill, grist mill and gin of W. H. Hearn, 6 miles from Farmersville.

Fernandina, Fla.—The machine shops of Florida Railroad & Navigation Co. Will probably be rebuilt.

Georgetown, S. C.—The turpentine distillery of Mr. G. Caraway, on Black river.

Grantville, Ala.—The flour mill of Mr. Miller.

Linwood, Ala.—The mill of Hugh Downing, near Linwood, wrecked by a boiler explosion.

McComb, Miss.—The dry kilns of J. J. White.

Orlando, Fla.—The planing mill of Cope-land, Starbird & Co.; loss \$3,000.

Walnut Cove, N. C.—The dry kiln of Kay Hill.

The gins of J. K. Hanley, 20 miles from Pine Bluff, Ark.; F. F. Stearns, Pioneer Mills, N. C.; R. J. Reinhardt, Iron Station, N. C.; W. C. P. Hoffmann, near Jena, Ala., and J. H. Alderman, Quitman, Ga., have been burned.

Developing Kaolin Lands.

BEECH ISLAND, S. C., Jan. 12, 1888.

Editor Manufacturers' Record:

I have purchased two tracts of land, five miles apart, on which remarkable deposits of kaolin have been discovered. One of these is now being opened and large buildings with equipment of teams, wagons, carts, etc., are being built and at work. It is proposed to have the product in market in March and extend the works to great proportions. The other will be developed the coming summer. In addition to the above, the Franklin Kaolin Co., recently organized under a charter from South Carolina, are erecting works on a large scale and expect to produce fine clay ready for shipment by 1st March. The main shed is being rapidly pushed. The works will be extended the coming summer. The writer has been elected president of the company. Altogether the outlook for the production of all the fine clay needed for the trade is particularly good. The clays recently found are the finest and most extensive in the South.

New Martinsville.—As the writer has been a successful shipper of clay for twenty years he feels confident it is not asserting too much to make such a statement. It is a very important discovery for this section. There has been recently—ten days ago—completed by a Southern mechanic, born and reared in this county, a stave and barrel mill, turning out first-rate casks for shipping clay. It is entirely a new enterprise, induced by the demand for casks at the Beech Island Clay Works and the developments above referred to.

THOS. J. DAVIES.

Will Build Street Railroad.

HUNTINGTON, W. VA., Jan. 14, 1888.

Editor Manufacturers' Record:

I will build a street car line in the spring. The Ohio River Railroad will build their road from Guyandotte to this city in the spring also. J. L. CALDWELL.

MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising column, and if you cannot find just what you wish send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, &c.

Broom machinery is wanted by W. W. & M. L. Peery, Tazewell, C. H., Va. Have water power.

Canning Machinery.—S. F. Cole, Boonsboro, Ark., wants information as to the cost, capacity, &c., of machinery for a canning factory.

Canning Machinery is wanted by Thornton F. Morrison, Americus, Ga. He wants information as to labels.

Engine—A. B. Cummings, Jonesboro, Tenn., wants to purchase a 6 or 8 horse-power stationary upright engine, new or second-hand, pony planer, drilling machinery to drill from $\frac{1}{4}$ -inch to 1-inch holes emery wheels, light band saw, &c.

Estimates on new and second hand machinery for manufacturing cotton-seed oil, fertilizers, &c., are wanted by W. R. Burgess, Greensboro, N. C.

Fire Escapes.—The school commissioners of Washington, D. C., will again advertise for proposals for furnishing fire escapes.

Good second hand machinery complete for a one-set mill for manufacturing coarse yarns and carpet warps is wanted by A. C. Burgess & Co., Greensboro, N. C.

Grain Elevator—J. C. Shields, secretary Chamber of Commerce Staunton, Va., wants to correspond with parties who can furnish plans, estimates, &c., for a grain elevator of from 50 M to 75 M bushels capacity.

L. F. Dickson, Opelika, Ala., wants to purchase an iron front, plate glass, sash, doors and windows for a building which he will erect.

Looms.—The Florida Palmetto Works, Jacksonville, Fla., want to purchase looms suitable for manufacturing matting and bagging for cotton bales.

Machinery for developing a mineral paint mine is wanted by W. D. & J. Barrow, Notasulga, Ala.

Ore Crushers.—Z. Hellman, Opelika, Ala., wants to buy ore and paint crushers and mill to grind the same.

Proposals for furnishing and erecting six steel boilers, 66 inches in diameter and 18 feet long, at the pumping station near Nashville, Tenn., will be received until February 2 by George Reyer.

Steam Heat.—Proposals for putting in the courthouse and postoffice at Macon, Ga., a low pressure return circulation steam heating and ventilating apparatus will be received until February 7 by Will A. Freret, supervising architect, Washington, D. C.

Tools.—Proposals for furnishing tools and materials for the navy yard at Portsmouth, Va., will be received until March 1 by the Secretary of the Navy, Washington, D. C.

Building Planing Mill.

TALLAPOOSA, GA., Jan. 13, 1888.

Editor Manufacturers' Record:

I am putting up a planing mill and machinery for making weather-boarding to be put in operation at once. Capacity 10 M to 15 M feet per day. J. C. JACKSON.

Building Railroad.

ISBELL, ALA., Jan. 13, 1888.

Editor Manufacturers' Record:

The Isbell & Iron Mountain Railroad Co. was organized December 29th, 1887, with C. H. Castle, of Quincy, Ill., president; J. B. Boyd, Quincy, Ill., vice-president; S. A. Blasland, treasurer, and J. E. Isbell, general manager. Work has already begun on the road. It will be six miles long and will connect Isbell and the iron fields of this county. J. E. ISBELL.

To Build Jail and Iron Bridge

TAMPA, FLA., Jan. 13, 1888.

Editor Manufacturers' Record:

The county commissioners of Hillsborough county will have constructed during this year a brick jail at Tampa, and an iron bridge across the Hillsborough river at Tampa. W. A. GIVENS, Clerk.

RICHMOND, VA., Jan. 12, 1888.

Editor Manufacturers' Record:

I and others have formed the Virginia Mining & Manufacturing Co.

BASIL B. GORDON.

Opened Vein of Cannel Coal

WILSONIA, W. VA., Jan. 16, 1888.

Editor Manufacturers' Record:

We have lately opened a vein of cannel coal six feet in thickness. It is of very fine quality, yielding 13,000 cubic feet of high candle-power gas to the ton. There is also another vein of cannel coal on this property not yet opened, and a vein of soft gas coal not yet opened. Lying above the cannel coal is an enormous quantity of clay iron-stone in many veins, alternating with veins of excellent coal, and two veins of limestone. No definite arrangements have yet been concluded for the development of the property. L. LEVERING.

The Cotton Factory for Lynchburg.

NEW YORK, Jan. 14, 1888.

Editor Manufacturers' Record:

The subscriptions (cash) to Lynchburg (Va.) cotton mill now amount to \$200,000, and it looks now that we can raise it to \$250,000; at any rate will try. On my return will organize and make a start as early as possible. M. GUGGENHEIMER, JR.

Remodeling Flour Mill.

FAYETTEVILLE, TENN., Jan. 13, 1888.

Editor Manufacturers' Record:

We are completely rebuilding our mill to a first-class roller mill, capacity 100 barrels per day, on the Case system. Will be in operation in ten days. Have one of the finest water-power locations in Tennessee; can furnish 3,000 horse-power. Any persons wishing to start cotton factory here we will offer inducements to them. BEARDEN, THOMAS & SHAFNER.

SMITH MINES,

(P. O., BIRMINGHAM) ALA., Jan. 14, 1888.

Editor Manufacturers' Record:

J. R. & C. J. Smith have now opened three mines—No. 1 at Fasel; No. 2 at Wares, and No. 3 at Reader's Gap. They have contracted to furnish 1,500 tons per day of ore. This is the largest ore contract in the South. They have two twelve drill Sargent compressors, two 80 horse-power engines to run their crushers, two Jumbo No. 4 crushers, and will employ from 1,000 to 1,200 men in all. They have 182 tenement houses, besides houses for foremen, &c., two commissaries, and carry about \$10,000 stock in them. In fact, they have quite a little town built up. Everything is new and is just started to work. A. J. TERRELL.

To Start Canning Factory.

PRAIRIE GROVE, ARK., Jan. 11, 1888.

Editor Manufacturers' Record:

A canning and evaporating company, with a capital of \$25,000, has just been organized with the following named gentlemen as directors, viz.: D. F. McMillan, E. G. McCormick, I. F. Flood, J. J. Baggett, S. D. Hardy, Wm. Mitchell, John O. Parks, W. R. Irwin, secretary. B.

Contemplate Building Tram Railroad.

BLACK MINGO, S. C., Jan. 10, 1888.

Editor Manufacturers' Record:

We are now putting up a steam saw mill; the size will be 25 horse-power with improvements. We also erected last fall a large store here, and an improved steam gin and grist mill. We are contemplating building a tram narrow gauge road to open up a large pine forest at an early date. F. RHEM & SONS.

Will Build a Large Church.

LYNCHBURG, VA., Jan. 13, 1888.

Editor Manufacturers' Record:

We propose to build a handsome new Gothic church on Clay street corner of 7th. Material of stone; seating capacity between 700 and 800. H. H. Law, of Washington, D. C., architect. Hope to break ground in the early spring. T. M. CARSON, Rector St. Paul's Church.

REIDSVILLE, N. C., Jan. 11, 1888.

Editor Manufacturers' Record:

A broom factory will be started by Richardson & Palmer. P.

CARTERSVILLE, GA., Jan. 13, 1888.

Editor Manufacturers' Record:

The Carterville Furnace Company has not been organized fully. We make no announcements until on a sure footing. The Central Company is mining and shipping iron ores pronounced by the Chattanooga furnaces to be the best received at that place. This company owns some of the most valuable mineral lands and leases in this country. It will soon build a branch railroad and do business on a large scale. No stock is for sale, but the company will extend substantial aid to any one wishing to put up furnaces, foundries or factories, having valuable sites and powers for these purposes. JOHN W. AKIN.

RISING SUN, MD., Jan. 13, 1888.

Editor Manufacturers' Record:

I placed in my mill one No. 2 band saw for the purpose of cutting heavy rime in connection with the bending of all kind of carriage and sleigh goods, making this line of work complete. I contemplate putting in a feed mill to run by an iron wheel this coming season. Purchased band saw from Cordesman & Meyer, Cincinnati, O. WM. P. ADDISON.

Electric Light Plant to be Erected.

REIDSVILLE, N. C., Jan. 11, 1888.

Editor Manufacturers' Record:

We will begin on the lights after the 1st of February, and will commence on a big scale to improve the town in other needed improvements. The largest tobacco box factory and lumber mill in North Carolina is just finished. C. I. LEWIS.

Enlarging Pencil Factory.

CEDAR KEY, FLA., Jan. 10, 1888.

Editor Manufacturers' Record:

F. A. Wolfe & Co. are enlarging their cedar pencil factory and adding new machinery. The F. R. & N. Railway will extend their track to the ice factory now about to be put in operation, for the purpose of furnishing transportation for fish, oranges and vegetables put in cold storage at this point. JAS. O. ANDREWS.

Will Rebuild Mill.

FALLING WATERS, W. VA.,

JAN. 13, 1888.

Editor Manufacturers' Record:

I will rebuild my flour mill. E. Z. STEPHEN.

To Build Hotel at Anniston.

ANNISTON, ALA., Jan. 13, 1888.

Editor Manufacturers' Record:

It is my intention to organize a company to build a down town hotel to cost about \$50,000. Have about one-half of the stock taken. R. H. CONN.

Will Erect Sugar Mill.

HUNTSVILLE, TEXAS, Jan. 13, 1888.

Editor Manufacturers' Record:

We will erect during the year and in time for present year's crop, a sugar mill on State convict farm on Oyster creek, in Fort Bend county, Texas, with capacity to take off 50,000 pounds sugar in 24 hours. Have 500 acres in cane. THOS. J. GRUE, Supt. Texas Penitentiary.

TULLAHOMA, TENN., Jan. 9, 1888.

Editor Manufacturers' Record:

I have been corresponding for some laundry machinery for Mr. Jno. H. Freese, of Lebanon, Tenn., as I am to start it up for him and run it till he learns to run it himself. I am going to add some machinery to my laundry by spring. JNO. L. COLLINS.

BALTIMORE, MD., Jan. 13, 1888.

Editor Manufacturers' Record:

We will remove to corner President and Fawn streets in two weeks. Cost of building \$25,000; engine and machinery to be put in will cost about \$10,000. Will employ about 75 hands, and expect to do a business of about \$75,000 to \$90,000 a year. Our present average is \$50,000. Are now established 19 months, having been incorporated June, 1886.

FURNITURE WORKERS

CO-OPERATIVE MPG. ASSO.

PERRY, GA., Jan. 9, 1888.

Editor Manufacturers' Record:

The Perry Variety Works have ginned 370 bales the past season. They have just contracted to manufacture the wood work to 12,000 names for the Perry Manufacturing Co. They will add a planer and several smaller machines. Would like the address of a practical broom maker, to whom they will give employment, and as soon as such arrangements are made will put in broom machinery. E. J. FULLER, Man.

Machinery Wanted.

NOTASULGA, ALA., Jan. 14, 1888.

Editor Manufacturers' Record:

We expect to develop the mineral plant on our land at an early day as practicable, and expect to need machinery for working it with. W. D. & J. BARROWS.

Water Works Contemplated.

CARTERSVILLE, GA., Jan. 14, 1888.

Editor Manufacturers' Record:

Our city fathers have taken the matter of water works in hand and say they intend to build to this end. They have appointed a committee with instructions to employ a competent engineer to make surveys, estimates, &c. D. W. K. PEACOCK.

Canning and Evaporating Factory.

HICO, ARK., Jan. 11, 1888.

Editor Manufacturers' Record:

There is a company organized here with a capital stock of \$6,000 for the purpose of building a canning and evaporating factory. The officers are: C. Slagle, president; Sam. Box, vice-president; Felix Miller, treasurer, and R. G. Raven-croft, secretary. This factory will be in operation by June 1, 1888. It is styled the Hico Canning & Evaporating Co. SAM. BOX.

MANUFACTURERS' RECORD.

Mississippi Notes.

Agricultural and Manufacturing Items.

[Special correspondence MANUFACTURERS' RECORD.]

ABERDEEN, MISS., January 14, 1888.

A new banking company was organized at Water Valley, on the 9th inst., to be called the "People's Bank." All of the prominent business men of the town and several Oxford capitalists are interested in the new enterprise.

Mr. J. H. Parnell, late of Ireland, brother of the distinguished Home Rule leader, has located at Crystal Springs, Copiah county where he will establish one of the most extensive fruit and vegetable farms in the South.

A twenty-acre plat adjoining Greenville is being laid off into town lots.

Aberdeen, Kosciusko, and other towns claim that every house within their limits is occupied.

Lawrence county boasts that there are no outstanding warrants against her treasury, and that it holds a surplus to the credit of all the county appropriations.

The Jackson Clarion and the State Ledger, of the same city, have consolidated under the name of the Clarion-Ledger. This makes one of the strongest interior publishing firms in the Gulf States.

The members of the Lincoln County Horticultural Club, at their meeting in Brookhaven last week, adopted the novel but excellent plan of entering into a written contract in which each man bound himself to cultivate a stipulated area in certain kinds of fruits or vegetables for export.

The Messrs. Smith, who farm three miles east of Brookhaven, in Lincoln county, made, during the season just closed, 2,000 bushels of corn, 60 bales of cotton, 4,000 pounds of pork, and large amounts of hay and other products. Lincoln county boasts many such enterprising farmers.

The Summit Sentinel says that "J. M. McGhee, of Franklin county, and his seven sons, with no other labor, made 180 bales of cotton last season, besides an abundance of corn, peas, potatoes, molasses, etc." The cotton alone, at \$45 per bale, yielded \$8,100.

The Mississippi State Horticultural Association met at Crystal Springs, in Copiah county, on the 11th inst., with one hundred delegates in attendance on the opening day.

The "piney woods" of Mississippi are wonderfully adapted to the production of all kinds of fruits and vegetables, and there is not a single plant or shrub or tree or vine that will grow anywhere on American soil that will not flourish there.

Commenting upon an item quoted from the Mississippi notes in your issue of December 31st, the Mississippi Daily News says: "The fruit and vegetable industry of Mississippi is yet, it may be said, in its infancy in comparison with what it will eventually become, and it is gratifying to the lovers of progress to know that it is increasing very rapidly throughout the State."

Lands in Copiah county, in the vicinity of Crystal Springs, that were hardly saleable at \$3 or \$4 per acre a few years ago, are now commanding from \$40 to \$50 per acre, owing to the profitable fruit and vegetable industry that has been built up in that vicinity.

The receipts of cotton at Aberdeen for the season commencing September 1st, up to January 5th, amounted to 24,461 bales, against 22,297 bales to corresponding date in 1887. On January 6th the shipments from Aberdeen amounted to 17,174 bales, leaving 7,287 bales in store in her warehouses.

A strong Chicago syndicate proposes to build the projected railroad from Memphis, via Oxford and West Point, to Columbus, if the counties through which it passes will give right of way and small subscriptions. The proposal has been received with great enthusiasm.

The Mulholland Spoke Factory Co., at

Vicksburg, that lost their plant by fire some days ago, has determined to at once resurrect the spoke factory and add a fine cotton-seed oil mill. \$50,000 of the oil mill stock was paid in on the 13th.

The two drying houses with four fine kilns, belonging to J. J. Whites' saw mill, burned on the 12th, destroying about 300,000 feet of dressed lumber and three miles of iron piping. The structures will probably be replaced at an early day.

The shipments of lumber from the port of Pascagoula, on our south coast, for the week ending January 18th were as follows:

	Feet.
To Guayaquil.....	1,051,882
To Liverpool.....	88,400
To Trouville.....	309,503
To Buenos Ayres.....	866,440
To Key West, Fla.....	180,858
Total.....	3,246,083
13,500 shingles.	

The above shipments indicate a busy time at the south coast saw mills, incident to the rise in the logging streams that has enabled the mills to get in their winter supply of stocks.

The Pascagoula Star-D mocrat predicts that the shipments of fruits and vegetables this year from the coast region to Northern and Western markets will exceed those of any previous season.

WARRENTON, VA., Jan. 14, 1888.

Editor Manufacturers' Record:

In addition to the canneries proposed by two of our citizens for next spring, we are in correspondence with a competent manager in Maryland with the view to establishing here next autumn an extensive apple evaporating plant. If 1888 proves to be a fruit year, the fine orchards of Fanquier can furnish the best apples for the purpose and in great abundance.

BETHUNE & JEFFRIES.

Enlarging Lumber Mill.

NASHVILLE, TENN., Jan. 13, 1888.

Editor Manufacturers' Record:

We have purchased one band saw mill, one additional circular saw mill, one Corliss engine, three new boilers and built a new factory, expending about \$30,000 in improvements, etc., now going on.

LIEBERMAN, LOVEMAN & O'BRIEN.

Brick Works to be Started.

FORT PAYNE, ALA., Jan. 13, 1888.

Editor Manufacturers' Record:

The company which proposes to manufacture fire and building brick at this place is one which has been in the same business at Raleigh, N. C., and intends moving to this place. J. D. Whitaker is the superintendent of the works and transacts the business.

THOS. H. SMITH.

Furniture Factory to be Built.

FORT SMITH, ARK., Jan. 9, 1888.

Editor Manufacturers' Record:

Our citizens have donated 3½ acres of valuable ground to a furniture factory from Chicago, known as the Northwestern Parlor Suit Co., but just who the men and officers are that compose the company I am unable to say at present. Their capital stock will be \$20,000, and they agree to employ, from and after the first year, from 125 to 150 men. They are to commence work within the next 30 days.

R. H. ADAIR, Sec. Cham of Commerce.

Contemplate Enlarging Works.

MARSHALL, TEXAS, Jan. 11, 1888.

Editor Manufacturers' Record:

The Marshall Gas Light Company contemplate in the coming summer to add another holder of gas to its present capacity. Hope we may succeed in erecting one to fully supply the demand.

W. C. PIERCE, SEC.

OIL CITY, PA., Jan. 13, 1888.

Editor Manufacturers' Record:

The Hulings Lumber Co. are building a boom at Hendricks, W. Va., and will build mill here the coming spring. The company has about 3,000 acres land near this point, with a boom at the mouth of Cheat river, where their present mills are. But if the West Virginia Central Railroad will give favorable rates a large quantity of the company's lumber will be manufactured at Hendricks; otherwise they will drive their timber through to slackwater navigation on the Monongahela river.

H. L. CO.

Enlarged Cotton Mill.

SHELBY, N. C., Jan. 14, 1888.

Editor Manufacturers' Record:

We have built an annex to our mill, 30x50 feet, for machinery. We are running day and night.

MILLER, BLANTIN & OATES.

Cotton Mill Machinery Wanted.

GREENSBORO, N. C., Jan. 16, 1888.

Editor Manufacturers' Record:

We think of erecting a small mill at Staley or Greensboro, N. C., for manufacturing yarns and carpet warps. Will probably use second-hand machinery if can be suited in quality and price.

A. C. BURGESS & CO.

DENISON, TEXAS, Jan. 12, 1888.

Editor Manufacturers' Record:

The Denison & Sherman Railroad Co. was incorporated January 6, 1888. It provides for the construction of a line of road from Denison, Texas, to Sherman, the object being to secure a closer connection between the Denison & Washita Railway, now building to the coal fields, with the St. Louis, Arkansas & Texas and the Texas & Pacific Railway systems. The headquarters and general office of the road will be at Denison. It is expected that construction will be commenced at an early date. The first board of directors are: Edward Perry J. B. McDougall Paul Waples Sam Hanna J. T. Munson E. H. Lingo J. R. Carr A. F. Platter and W. B. Munson.

W. B. M.

Erected Saw Mill.

MEMPHIS, TENN., Jan. 15, 1888.

Editor Manufacturers' Record:

We have erected a saw mill for cutting quartered oak, and have it in operation; also operate cotton gin of 120 sows. Capacity of saw mill 20 M feet per day. Machinery built by Sinker, Davis & Co., Indianapolis, and Atlas Engine Works, of same place. Business good; ready sale for the product of our mill.

COOPER & BODMAN.

Plans for Church Wanted.

MACON, MISS., Jan. 14, 1888.

Editor Manufacturers' Record:

I desire to receive plans for brick or frame church to be erected by Presbyterians at this place, cost not to exceed \$3,500 for former or \$2,500 for latter. The usual commission will be paid for plan that may be adopted.

ROBERT C. PATTY.

To Build Gas Works.

TALLAHASSEE, FLA., Jan. 14, 1888.

Editor Manufacturers' Record:

The Tallahassee Gas & Electric Light Co. is organized with a capital of \$50,000, and will build gas works at once. The plant has been secured, but we have not yet purchased pipe and fixtures. The officers are E. S. Crill, president, and W. M. McIntosh, Jr., secretary.

W. M. MCINTOSH, JR.

JUST before going to press, we are in receipt of a copy of the Durham (N. C.) Recorder, edited by the same individual who edits the new paper there, called the Southern Tobacco-ist and Manufacturers' Record, to which reference was made in our columns last week, and also on our first editorial page to-day. The Recorder claims that it did not receive a

copy of the MANUFACTURERS' RECORD containing our warning to the public, and indulges very freely in Billingsgate, the usual refuge of such people, but it forgets to mention that its editor had received a letter, calling his attention in very plain terms to this swindle, in attempting to pirate the name of the MANUFACTURERS' RECORD, even to the style of letters used. This letter was mailed January 5, but has received no answer. As stated on our first editorial page, the imitation is carried so far as even to imitate the peculiarity of the letter "M" which begins our heading. To deny this is folly, as an examination of the two headings would convict the individual doing so of being a liar.

Negotiating for Cotton-Seed Oil Mill.

DECATUR, ALA., Jan. 7, 1888.

Editor Manufacturers' Record:

I have negotiated for the erection of a cotton seed oil mill, and expect to conclude the bargain within a week, but the contract has not been signed as yet.

DECATUR LAND, IMP. & FURNACE CO., H. G. BOND, Gen'l Manager.

THE Woman's World improves with every number and that for February is particularly interesting. The frontispiece is a portrait of the Princess of Wales in her academic robes as a doctor of music. "Medicine as a Profession for Women" is the subject of a paper by Mary A. Marshall, M. D. The "Greek Plays at the Universities" are described by a Girton girl. Following this is a paper on Alexander College, Dublin, which was founded by Mrs. Jeilcoie, who was its first president. The literary and other notes by the editor, Mr. Oscar Wilde, are more literary than otherwise, but they are all conspicuous for that easy style and cleverness for which Mr. Wilde is famous. The discussion of the month's fashions is left to the end of the magazine. There are London fashions and Paris fashions and pictures of Sara Bernhardt's costumes in her new play. Cassell & Co. New York publishers.

Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, Jan. 18, 1888.

	BID	ASKED
Virginia 6's Consols C.....	40 1/2	40
Virginia 3-1/2 to 10-1/2's.....	35	
Virginia 3's, new.....	63 1/2	64
Virginia Consol Coupons.....	28 1/2	29
Virginia to 40 Coupons.....	26	
N. Carolina 4's.....	95	
N. Carolina 6's.....	121	
Atlanta & Charlotte.....	81 1/2	83
Charlotte, Col. & Aug.....	83	
Wil., Col. & Aug.....	83	
Va. & Tenn. 5's.....	122	124
Wil. & Wil., 5's.....	111	
Wil., Col. & Aug. 6's.....	118	
Atlanta & Char. 1st, 7's.....	119 1/2	
Col. & Green. 1st, 6's.....	101 1/2	101 1/2
Col. & Green. ad. 6's.....	76 1/2	78
Va. Mid. and ad. 6's.....	117 1/2	
Va. Midland 4th, 3-1/2's.....	75	
Va. Midland 5th 5's.....	101	103 1/2
Char. C. & Aug. 1st, 7's.....	109	
Char. C. & Aug. ad. 7's.....	111	
Ga. Pacific 1st, 6's.....	106 1/2	108
Ga. Pacific ad. 6's.....	107	
Western N. Carolina Consol'd 6's.....	97	
Cape Fear & Y. Valley 6's.....	94 1/2	95

Will Improve Cotton Mill.

TRION FACTORY, GA., Jan. 9, 1888.

Editor Manufacturers' Record:

The matter of increase in the capacity of the Trion Manufacturing Co.'s mill is under advisement. The immediate improvement that is now in contemplation will be the changing about half the spindles to the Whiting gravity spindle, the adding of some cards and other card machinery. Have just completed a system of automatic sprinklers throughout the mill.

TRION MANUFACTURING CO.,

G. B. MYERS, Sec. and Treas.

Additional Machinery.

ROME, GA., Jan. 12, 1888.

Editor Manufacturers' Record:

We are putting 20 new looms in our mill in addition to what we put in last spring.

C. E. MC LIN,

Sec'y Rome Cotton Factory.

Canning Factory.

BRUGH'S MILL, VA., Jan. 13, 1888.

Editor Manufacturers' Record:

I have bought my machinery, and will put up can goods next season; capacity on tomatoes 7,000 to 10,000 cases. R. BRUGH

Electric Light Plant.

BRENHAM, TEXAS, Jan. 12, 1888.

Editor Manufacturers' Record:

A Mr. Richards is now in the city perfecting arrangements to introduce the Thompson Houston electric light, which he expects to have in operation by the 15th of March.

J. G. RANKIN.

Will Rebuild Flour Mill.

GAINESVILLE, TEXAS, Jan. 10, 1888.

Editor Manufacturers' Record:

We will rebuild at once; capacity 200 barrels.

BRADY BROS.

Will Rebuild Compress.

GREENVILLE, TEXAS, Jan. 6, 1888.

Editor Manufacturers' Record:

Greenville Cotton Press will be rebuilt.

G. D. RAMSEY, JR., Gen'l Man.

Laundry for Anniston.

TULLAHOMA, TENN., Jan. 9, 1888.

Editor Manufacturers' Record:

We are going to start a laundry at Anniston, Ala., by the first of February.

TOPE & BACHELDER.

To Develop Kaolin Lands.

CHARLESTON, S. C., Jan. 6, 1888.

Editor Manufacturers' Record:

We will organize a kaolin company in a few days, named the Imperial Kaolin Co. of South Carolina; capital stock \$150,000.

GEO. A. WAGENER.

To Develop Coal Lands.

FORT WORTH, TEXAS, Jan. 10, 1888.

Editor Manufacturers' Record:

We are going to build our road to the coal fields of Jack and Young counties this year. We have purchased and leased a large acreage of coal lands, and will develop them during this year.

FORT WORTH & WESTERN R. R. CO.

W. W. H. LAWRENCE, Pres.

Doubled Capacity.

BIRMINGHAM, ALA., Jan. 11, 1888.

Editor Manufacturers' Record:

We have doubled our capacity of last fall, but it is only carrying out our original idea, and we now have a capacity of 300 boxes per day, in perfect order.

BIRMINGHAM SOAP WORKS.

Contracted to Build Water Works.

LYNCHBURG, VA., Jan. 12, 1888.

Editor Manufacturers' Record:

We have closed contract with the town council of Marion, Va., to build their water works; contract price \$12,000. Work is to be completed on or before July 1, 1888. Have orders on file for six months' work in our various departments, and contemplate enlarging our works at an early day.

GLAMORGAN CO.

Plans for Courthouse Wanted.

HUNTSVILLE, TEXAS, Jan. 9, 1888.

Editor Manufacturers' Record:

Plans are invited to February 18, 1888, for a courthouse for Walker county, Texas, not to exceed in cost \$22,500. Specifications for both brick and stone, in order that contractors may bid for either a brick or stone building.

J. M. SMITHER, County Judge.

Increased Capacity of Factory.

DANVILLE, VA., Jan. 10, 1888.

Editor Manufacturers' Record:

We have increased our capacity from 600,000 pounds tobacco per year to 1,000,000 and over per year.

ARNETT, SNELLING & CO.

Two Canning Factories

OVERTON, TEXAS, Jan. 7, 1888.

Editor Manufacturers' Record:

We are to have two canning factories, and they are to be constructed by responsible men—Messrs. Alford & McGilvery and Douglass & Co.

J. B. HOWER.

Remodeling Flour Mill.

ELIZABETHTON, TENN., Jan. 11, 1888.

Editor Manufacturers' Record:

I have purchased new machinery. I am now remodeling my flouring mill at this place.

W. B. CARTER.

C. R. MAKEPEACE & CO.**ARCHITECTS and MILL ENGINEERS**
PROVIDENCE, R. I. Plans, Specifications and Estimates furnished for Cotton and Woolen Mills.**D. W. K. PEACOCK,**
Real Estate Agent,

CARTERSVILLE, GA.

Minerals a Specialty.

Refers to THE HOWARD BANK, Cartersville, Ga. J. W. RAYNER, Atlanta, Ga.

Manufacturers' Bureau, of Fort Smith, Ark.

Invites correspondence and propositions from manufacturers with a view to locating at Fort Smith. Fort Smith is the center of an immense semi-anthracite coal, lumber, iron and cotton region, with railroad facilities giving close connections with the markets of Kansas, Texas, Missouri, Indian Territory and Arkansas. Population in 1880, 7,500; in 1886, 24,000; in September, 1887, 18,000.

Rare Chance for Investment.

The entire property of the COLUMBUS ICE COMPANY, including ample grounds, eligibly located, good Buildings, and Machinery in good order. Capacity from 3½ to 5 tons daily. Made money every season. Sold for division. Cash purchaser can get a splendid business bargain.

L. M. TUCKER, President.

REAL ESTATE IN A Booming Alabama Town FOR SALE.**Three Hundred Choice Business and Residence Lots in the CITY OF ANNISTON.**

This property is the best in the city, and having been bought before the boom, will be sold at prices affording investors a rare opportunity to make certain and handsome profits. Address

F. M. HIGHT, Anniston, Ala.

GREEN FOREST,
Rockbridge County, Va.

Best location in the State for a Furnace. Vast beds of rich Buena-Vista iron are at hand. Coke at less than three dollars per ton. Eight acres for a site offered FREE on the S. V. R. and the R. & A. Railroad.

Best location for a Paper Mill. Supply of soft wood unlimited. Two acres FREE for a site.

Best location for a Woolen Mill. One acre FREE for a site. Large water power available. Write to

R. C. MOONAW.

Gallatin, Tenn., Cotton Factory FOR SALE.

Factory is situated immediately on Chesapeake & Nashville R. R., and right in city of Gallatin, on L. & N. R. R. Factory has one horse power engine, 126 looms, with sufficient machinery to run the looms to their full capacity; never failing water for all purposes. Machinery automatic and of latest improved kind. Makes from 7,000 to 7,500 yards of goods per day. Looms 4-4, but arranged to make, when desired, either 5 or 6 yards. There is also attached to factory merchant grain mill; in addition large double brick house, also eleven cottages for operatives. Property cost \$15,000. Will be sold at a bargain. Machinery will be sold separately if desired. There are some 30 acres of land adjoining factory. For particular address

BANK OF GALLATIN,

Gallatin, Tenn.

Cotton Yarn Mill At Augusta, Ga.**FOR SALE.**

Will be sold at public outcry, on 7th day of February, 1888, at 12 o'clock noon, at the Lower Market House, in the City of Augusta, Ga., under regular Administrators' Sale, by virtue of an order of the Court of Ordinary of Richmond County, Ga., the property known as THE SHAMROCK MILLS, situated on and run by water-power derived from the Augusta Canal, consisting of ninety-five hundredths (95-100) of an acre, more or less, of land, together with the buildings thereon and all machinery connected therewith, embracing twenty-four hundred and ninety-six (2496) Spindles and all necessary Machinery for the manufacture of Fine Yarns. Automatic Sprinklers throughout. For further particulars apply to Joseph B. Cumming or Charles A. Harper, Attorneys at Law, Augusta, Ga.

C. G. GOODRICH, G. J. FARGO,
J. E. HARPER, J. B. DOUGHERTY,
Administrators on Estate of John Davison.

A Rare Chance FOR SALE.**Abstract Agents****Bond and Stock Brokers,**

Tuscaloosa, Alabama.

Ten years' experience in handling Southern lands. Coal, iron and pine lands a specialty. Refer with permission to F. S. Moody, president First National Bank; J. H. Fitts, president Castle Hill Land Co., and Fitts' Bank.

Office up Stairs, Over Spiller's Store.

Well posted in coal and pine lands.

NOTICE

TO

Manufacturers.

Special attention is directed to persons engaged in manufacturing industries to the property of the South Baltimore Harbor & Improvement Co., located at Curtis Bay, about one mile southeast of Light Street Bridge, being the Southern Boundary of Baltimore City and near the extensive Car Works just completed and in operation. Particular notice of manufacturers East and North of Baltimore is called to this locality, which, besides its proximity to the Southern markets, has many advantages, such as railroad and water communications, cheap house rents, easy access to the city, &c., &c. The location is high and healthy, rising to about 100 feet above tide water. For further particulars apply to

WM. S. RAYNER,
Prest. S. B. H. & I. Co.

8 E. Lexington St. BALTIMORE.

SALE OF Cotton Factory FLOURING MILL,
AND OTHER**Valuable Real Estate.**

By virtue of a deed in trust, executed to me by A. Hines and wife, M. B. Hines, of Surrey county, recorded in book 1, page 520-521, register's office of Surrey county, on 25th day of June, 1888, I will expose to sale at public auction in Mt. Airy, on WEDNESDAY, the 1st day of February, 1888, the following described real estate, lying in the town of Mt. Airy on the Ararat river, known as the HAMBURG MILLS, containing 4½ acres. On this tract is situated a BRICK COTTON FACTORY, fully equipped with machinery, a VALUABLE FLOURING MILL, SHOE FACTORY, STOREHOUSE, and a number of tenement houses. This is one of the finest water powers in Surrey county. The Mill is within one mile of the railroad, and is one of the finest properties in North Carolina. Terms of sale, cash.

J. C. BUXTON,
Trusted
Dec. 19th, 1887.

The Crosby Rapid Transit Wrench

This wrench, shown in cut, is a recent invention manufactured by The E. H. Pease Manufacturing Co., of Racine, Wis. The strong points to recommend it are its instantaneous adjustment for duty, its rigidity and strength. Can be changed from one size of nut or bolt to any other size instantly—a half-turn of the nut locks the wrench securely; a half-turn back again permits the movable jaw to slide up and down the bar freely. When adjusted the movable jaw remains in its place, no matter what the strain upon it is, while in a great many



RAPID TRANSIT WRENCH.

of the old wrenches a heavy strain will loosen the grip of the wrench. Unlike most wrenches, the "Crosby" wrench takes all the strain directly on the main bar, and not on a supplemental jaw, connected by only a light frame, which is liable to break or tear out under a heavy strain. The construction is such that it is as strong when opened to its fullest capacity as at any other point. In spite of the superior construction and value, these wrenches are sold for only a trifle more than the ordinary monkey wrench. Prices and lowest discounts quoted to the trade.

REFERRING to the death of Mr. Chas. D. Crutchfield, formerly of Baltimore, a son of the editor of the Baltimorean, The American of last Saturday, says: "He was born in Richmond, Virginia, where his father for many years was prominently connected with newspapers. The deceased entered upon his career in journalism in this city, his contributions to The American being among his first efforts. He did not remain long in Baltimore, but became a member of the local staff of the Philadelphia Record soon after that paper was established. Turning his attention particularly to railroad matters, he soon won a reputation in this important line of newspaper work. Making a careful study of railroad, coal and mining interests, few, if any, newspaper men in this country were better posted on these subjects than he. For many years he has been the railway editor of the Record, and he was regarded as a high authority on railroad news. For some years, and at the time of his death, Mr. Crutchfield was the Philadelphia correspondent of The American, and his special despatches on railroad matters and other business topics were read with interest in Baltimore's business circles. Mr. Crutchfield possessed those genial qualities which made him many friends. He was a hard worker. By his death the Record loses a valuable editor and The American one of its best correspondents. The deceased was but thirty eight years of age, and leaves a wife and one child."

THE January Wide Awake is the New Year's issue, a fine holiday number, delightfully pictorial, giving as it does a dozen of the beautiful pencil pictures of child life by the English pencil-artist Warwick Brookes, together with an autograph letter of Mr. Gladstone's. Mr. Letherbrow's account of him is very interesting. But the most valuable article of the number is "The Foster-Children of George Washington," the first of Mrs. Harriet Taylor Upton's series, "Children of the White House." This has seventeen illustrations from the beautiful Stuart and Fine paintings and from old objects and scenes in and around Mount Vernon. The various presidential families are said to be greatly interested in

this series, knowing how valuable it will remain for all time to come to young American people. Another delightful contribution is an illustrated article by Maud Howe (daughter of Mrs. Julia Ward Howe) entitled "My Friends, the Dogs;" this furnishes the frontispiece; "Miss Maud Howe and her dog Sambo," from the famous painting, by B C Porter in the Corcoran Gallery, Washington. Prof. Roberts, of King's College, Windsor, furnishes a good true story, "The Bull and the Leaping Pole." Olive Risley-Seward gives an exciting story of her "Journey to Peking," with Secretary Seward in his trip around the world. Mrs. General Fremont in her "Cruise of a Coverlet,"

was critically examined by the numerous brick manufacturers present, who seemed to approve of its utility and recognize its value to the craft. It is manufactured by C. W. Raymond & Co., Dayton, Ohio.

Gadsden, Ala.—Rapid Completion of Her Industries.

GADSDEN, ALA., Jan. 13, 1888.

Editor Manufacturers' Record:

The 100-ton coke furnace now being built by the Gadsden, Alabama Furnace Co. is rapidly approaching completion. The magnificent new hotel, the Printup House, has been sold to L. W. Scovill, formerly of the Kimball House, of Atlanta, Ga. Mr. Scovill will open this splendid hostelry on or before the first of March next. The splendid iron bridge over the Coosa river will be ready for the trains by the 15th of February. The Rome & Decatur Railroad is to be completed in sixty days. Arrangements have been made in New York to complete the Tennessee & Coosa Railroad to Gunterville, Ala., by the first of October, 1888. New York capitalists have been placed in the directory, and the completion of this line, connecting the waters of the Tennessee and Coosa rivers, will be completed as soon as men and money can accomplish it. This road opens up to Gadsden the finest coal, iron and timber section in the South; gives us the short rail and long water haul to St. Louis and cities of the West. The Gadsden Land & Improvement Co. contemplate a public sale of 1,000 lots in February, at which the stock of the company will be received in payment at 25

Smith's Friction Drill.

A thoroughly practical and most valuable invention, one of much interest to machinists, boiler-makers, steam pipe and gas fitters, and to all parties who have occasion to use the ratchet drill, is shown in the annexed cuts. There are so many places where recourse must be had to the ratchet drill that any real improvement on the old ratchet movement, with its noise, its lost motion at each thrust, and its frailty, will be of real benefit to the mechanical world.

In the friction drill here shown the well-known and absolutely certain friction-clutch principle is employed, and that so successfully and instantaneously that this drill will work successfully and with good speed in the space lost, or, in other words, the lost motion space of the ratchet. To illustrate: It requires over 3 inches of backward thrust



FRICTION DRILL.

at the out end of the 12 inch handle of the ratchet drill to enable the ratchet to catch one tooth. With this friction drill less than $\frac{1}{2}$ inch backward thrust will suffice to set the clutch; in fact, the eye will fail to detect any backward movement of the clutch, so very careful and perfect is the mechanical arrangement. It will successfully work, therefore, in places so contracted that a ratchet drill is entirely useless. By reason of its construction and arrangement, it has hardly more than half the parts in number of the ratchet, and it will stand, it is said, strains and hardships that would destroy the intricate mechanism of the old-style drills. All the working parts, the body, cam, friction rolls and feeding screw are of the best quality of steel, drop forged and specially tempered. The feed-screw has a regular turned square thread that will resist any pressure required to force a dull drill.

This drill is the invention of Geo. W. Smith, of Boston, aided by his brother, B. F. Smith, the latter having spent a large amount of money and years of time in bringing it up to its present form. In this form it has been in use subject to the severest tests during some four years, and is now put on the market with every guarantee of success. Two styles are made, one for ordinary drilling, as illustrated in the cut, and one for boiler-makers' use, which is shown in the advertisement on page 1062. They are gotten up in excellent style and workmanship. They are manufactured by the F. F. Waters Manufacturing Co., 266 Washington street, Boston Mass., who should be addressed for further particulars.

THE Anniston Hot Blast thinks that the man who doesn't advertise because times are dull is about as wise as the one who won't eat because his stomach is empty. That is hitting the nail on the head pretty closely.

THE MANUFACTURERS' RECORD, published in Baltimore, Md., and devoted largely to notices of Southern industrial enterprises, is one of the best journals of its class with which we are acquainted. It is edited with marked ability, and published in the best style of the typographic art — Greensboro (Ala.) Beacon.

ADVERTISERS wishing to reach the manufacturers of all classes, mining companies, steel, iron and hardware dealers of the entire South, cannot find a better medium than the MANUFACTURERS' RECORD.

PERFECTION BRICK PRESS.

the National Brick Makers' Assembly, held at Chicago, by its unique and novel adaptability for making ornamental bricks, such as string and belt courses, panel work, &c., the most elaborate designs being pressed upon one die and delivered therefrom by one motion of its powerful lever, and that without any previous preparation of the brick or striking out mould. Usually this work requires a separate die for each design and a corresponding mould for striking out to work with it, but by the use of the Perfection this great item of expense is saved, and the manufacture of ornamental and moulded brick brought within the range of the man of ordinary means and facilities. The press

cents on the dollar. The stock so received will be retired and cancelled. The sale will give fine opportunity for parties holding stock to realize on it at once and make good money. Not a vacant house in Gadsden—with great demand for houses. Every house built finds a dozen applicants before it is finished. Parties seeking investment in the growing cities of North Alabama can find no better place than Gadsden to put their money in. For any information in connection with our section address M. L. FOSTER, Sec. & Treas., Gadsden Land & Improvement Co.

Subscribe to the Manufacturers' Record.

ALABAMA'S GREAT MINERAL WEALTH

SURROUNDS THE

* CITY OF TALLADEGA, *

Which, according to statistics, is the **MOST HEALTHFUL CITY IN ALABAMA**, and the County Seat of Talladega County.

THE CITY HAS A POPULATION OF 5,000, AND ITS POPULATION IS RAPIDLY INCREASING.

TALLADEGA is on the main line of the E. T. V. & G. Railroad, the A. & A. Railroad, and is the present terminus of the T. & C. Railroad. Work is rapidly progressing on the Birmingham & Savannah Air Line Road, between Birmingham and Savannah, and within twelve months this road will be completed via Talladega from Birmingham to Savannah, which will place Talladega on the direct line from Birmingham to deep water on the Atlantic, making

TALLADEGA ONE OF THE BEST DISTRIBUTING POINTS IN THE STATE.

THE CITY HAS

AN EXCELLENT SYSTEM OF COMMON GRADED SCHOOLS,

With a scholastic population of 500, and **THE MOST COMMODIOUS AND ATTRACTIVE PUBLIC SCHOOL BUILDING IN THE STATE**. The main building is a three-story brick, slate roof structure, well ventilated, heated by steam; has accommodations and seating capacity for 500 pupils. This school is owned and sustained by the city. All branches of English literature, foreign languages, music, the sciences and art, are taught for a nominal tuition. Among other educational institutions are the following:

SYNODICAL FEMALE INSTITUTE, Property valued at \$50,000.

D. D. & B. INSTITUTE, Property valued at \$150,000.

BLIND INSTITUTE, (in course of construction,) property valued at \$150,000.

FOSTER COLLEGE, property valued at \$150,000.

No other city in Alabama has so many educational institutions and so many public buildings.

← TALLADEGA HAS THE MOST COMPLETE SYSTEM OF WATER WORKS IN THE STATE. →

The stand pipe has a capacity of 175,000 gallons, and into this reservoir a supply of fresh, clear, pure water is pumped every day from a large spring located in the heart of the city, which discharges over 2,000,000 gallons per day. The gravity pressure from this system is 90 pounds to the square inch in the business portion of the city. The city has broad streets, well macadamized and shaded with beautiful trees, and is well lighted with a **SUPERIOR QUALITY OF GAS**. Sixty fire plugs and forty gas lamps protect against fire and illuminate the streets.

A **LARGE FURNACE PLANT** gives employment to thousands of hands, and makes a high grade of chilled car-wheel iron from ores, limestone and coal within ten minutes haul by rail, or an hour's haul by wagon. **FOUR LARGE LUMBER MILLS**, with an aggregate daily capacity of 200,000 feet of lumber, cut from the long-leaved yellow Pine of this country. **FOUR BRICK YARDS** are in active operation. A **SASH, DOOR and BLIND FACTORY**, a **FOUNDRY, MACHINE SHOP, FLOUR MILL, COTTON-SEED OIL MILL**, and various other industries are in successful operation, and the **TALLADEGA ICE CO.** cools the thrifty population with pure ice at 50 cents per hundred. Another large furnace plant will be completed within the next ten months. A Spoke and Handle Factory and many other industries are projected, with a view to early completion.

Taxable property has increased 100 per cent, within the past twelve months. The rate of taxation is limited in the city charter to half of one per cent, and the city offers an exemption from taxation to all manufacturing enterprises for a period of ten years. The county of Talladega supplies more crude material, in the way of minerals and timber, than any other county in the State. Almost within the corporate limits of the city are extensive deposits of the highest grades of limonite ores, yielding 50 to 58 per cent. metallic iron, with only a trace of phosphorus, and limestone abounds in the greatest abundance. Coal is within twenty miles by rail.

THE TALLADEGA LAND & IMPROVEMENT CO. owns 5,000 lots suitable for residences, business and manufacturing, in and adjacent to the city. Lots are donated to manufacturing enterprises, and liberal inducements offered to actual settlers. SPRING LAKE PARK is owned by this company, and it is being made the most attractive resort in the State. The lake covers an area of seven acres, and is a beautiful sheet of clear spring water. Parties seeking a healthy climate, free from malaria and epidemics, and a prosperous city, are invited to visit Talladega. Address for maps, etc.

The Talladega Land & Improvement Co.,  **Talladega, Ala.**

ATHENS, East Tennessee

THE COMING

→ Iron and Manufacturing City of the South. ←

Athens is the county seat of one of the most fertile counties in East Tennessee. The health of the city is unsurpassed, and is **ABSOLUTELY FREE FROM ALL MALARIAL OR EPIDEMIC DISEASES.** The surrounding scenery is very fine. From the main avenue the whole valley of East Tennessee can be seen, from the Cumberland Mountains on the west to the Great Smoky Mountains on the east; some of the tallest peaks east of the Rockies being in full view. FINE MINERAL SPRINGS are adjacent and are popular summer resorts. The society of Athens is excellent. A cordial welcome is extended to all law-abiding people locating in the town. The EDUCATIONAL FACILITIES are good. Beside public and preparatory schools, Athens is the seat of **THE GRANT MEMORIAL UNIVERSITY**, which has an enrollment of over 300, and whose graduates include some of the most distinguished citizens in the country. Among the industries and institutions of the place in active operation are:

THE ATHENS BUILDING & LOAN ASSOCIATION, \$250,000. **THE ATHENS WOOLEN MILLS, \$100,000.**

THE FIRST NATIONAL BANK, \$50,000.—To be increased at once.

FOUNDRY & MACHINE SHOPS, \$25,000.

FURNITURE WORKS, \$15,000.

FLOURING MILLS, \$20,000, etc.

500 men are now at work on the new railroad from Athens to the

RICHEST IRON FIELDS IN THE SOUTH.

JUST EAST OF THE TOWN.

Only eight miles from Athens are **VEINS OF RED FOSSILIFEROUS ORE 11 FEET THICK**, and 4 to 12 miles beyond are **THE LARGEST DEPOSITS OF BROWN ORES IN THE SOUTH.** The ores of both varieties, in addition to being inexhaustible, are both superior in quality to any ores of either variety at present mined in the South. An assertion that can be sustained. Coke can now be obtained at the lowest prices, and in addition a new railroad is now projected to the Cumberland Coal Fields, only 22 miles distant. These roads will give Athens **UNSURPASSED SHIPPING FACILITIES.** The road under construction will penetrate large deposits of Tennessee Variegated Marble; also an Unopened Timbered Region, and will develop the

Largest Colored Slate Deposits in the United States.

These quarries are now being opened, and are pronounced by experts Absolutely Inexhaustible, and equal in quality to the finest Vermont Colored Slate.

The ATHENS MINING & MANUFACTURING CO.

Have alone just contracted for the erection of over

\$500,000 IN NEW MANUFACTURING ENTERPRISES

At Athens, including a 100 ton Blast Furnace, cost \$200,000; Cotton Mills, cost \$150,000; Furniture Works, employing 200 men, cost \$100,000; Hotel, cost \$60,000; Water Works, Street Car Lines, &c. These improvements have been commenced which, added to other improvements projected, will add

\$1,000,000 OF NEW MANUFACTURING ENTERPRISES TO ATHENS.

The company desire to open correspondence with parties desiring to locate, and will extend liberal inducements in addition to gifts of sites in order to induce New Manufacturing Enterprises to locate in Athens. City property is doubling in value every few months, and at present low prices is beyond question a very fine investment.

The Athens Mining & Manufacturing Company,

R. L. BRIGHT, President.

R. J. FISHER, Secy. and Genl. Manager.

DECATUR, ALA.

Offers outside investors better inducements to locate than any other

CITY IN THE SOUTH.

AS A CITY OF

Mammoth MANUFACTURING Enterprises,

She has few equals and no superiors in the South.

There have been located at Decatur in the last four months the following Industries:

THE DECATUR LAND, IMPROVEMENT & FURNACE COMPANY. Has 50,000 ACRES of Iron, Coal, Mineral and Timber LANDS
The Louisville & Nashville Railway Car Works. Cost of Buildings, \$300,000.

Charcoal Company's plant, costing \$120,000.
 A seventy-ton Charcoal Iron Furnace, costing \$190,000.
 A one hundred-ton Blast Iron Furnace, costing \$225,000.
 The Decatur Iron Bridge Construction Company; cost of plant, \$100,000.
 The American Oak Extract Company's plant, costing \$60,000.
 Ivens & Sons Steam Boiler and Engine Works, costing \$100,000.
 Morse Cotton Compress plant, costing \$60,000.
 Decatur Lumber Company, Saw and Planing Mills, costing \$50,000.
 Berthard & Co., Sash, Door and Blind Factory, cost \$15,000.
 The Decatur Street Railway Company.
 The Telephone Company.
 Brush Electric Light Company, cost \$10,000.
 The Ironton Wheelbarrow Company, cost \$25,000.
 Howland & Co's Water Works System, costing \$200,000.
 Bleymeyer Artificial Ice Company, cost \$10,000.
 Four Mammoth Brickyards.
 Jones, Poley & Co's Lumber Yards.
 The Hoosier Mills & Building Company.
 The Gate City Sash & Door Company.

Arantz Bro's Mills and Lumber Yards.
 Grant & Co's Furniture Factory.
 Southern Lumber Company.
 H. S. Freeman's Mills and Lumber Yards.
 The Alabama Farmer's Friend Fence Machine Company.
 The Decatur Artificial Stone Company.
 Decatur Chain and Architectural Iron Works, capital \$100,000.
 Natural Gas Company, capital \$200,000.
 First National Bank, capital \$100,000.
 The Exchange Bank of Decatur, capital \$100,000.
 Merchants' Insurance Company, capital \$100,000.
 Decatur Building Association, capital \$300,000.
 Decatur Building Company, capital \$1,000,000.
 Buchheit's Bottling Works.
 Decatur Printing Company.
 Two daily papers, three weekly papers.
 Two hotels are building—one \$60,000, one \$300,000; the largest in the South.
 Grand Opera House, \$100,000.

* THERE ARE OTHER *

Mammoth Enterprises

Locating here, and contracts are being made with some of the most extensive industries in the United States.

Decatur is the Healthiest city in Alabama, the death rate among whites for 1886 being only 11 in 1,000.

Decatur Land, Improvement & Furnace Company.

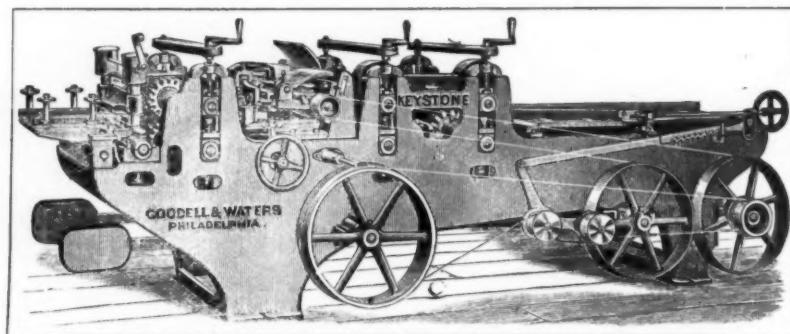
E. C. GORDON, President. H. G. BOND, Vice-Prest. and Gen. Manager. W. E. FOREST, Secretary.

This Company has been pre-eminently successful in promoting the interests of the city of Decatur.

CORRESPONDENCE SOLICITED WITH PARTIES SEEKING LOCATIONS.

"KEYSTONE"

Rapid Feed Flooring Machine.



SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.

GOODELL & WATERS, Manufacturers,

WESTERN WAREROOMS:

11 and 13 S. Canal Street,
CHICAGO, ILL.

MR. C. L. RICE, MANAGER.

3002 Chestnut Street,

PHILADELPHIA.

ECONOMY IN FUEL!

↔ SUBSTITUTE FOR COAL AND WOOD. ↔

Manufactories, Public and Private Buildings supplied
with Heat and Power at half the cost of coal
or wood, by means of a new apparatus for
★ the perfect combustion of petroleum ★
and other liquid fuels.

THIS APPARATUS IS NOW BEING USED FOR
RUNNING STATIONARY AND MARINE BOILERS,
RANGES, FURNACES, GLORY HOLES, LEARS, POT-
TERTY FURNACES, CHEMICAL STILLS, &c.



OFFICE OF THE CRYSTAL PALACE GLASS WORKS, BROOKLYN, N. Y.
In the past four years we have experimented with a great many burners for Glory Holes, and have found the "Scory Burner" to be the most satisfactory. Having been using four of these burners for twelve months at our works with the best results, we can recommend it as safe, economical and reliable.

Respectfully,
THE E. P. GLEASON MFG. CO.

JAMES J. MURRAY & CO., MERIDIAN FLINT GLASS WORKS,
Manufacturers of Opal and Flint Globes and Shades of all Shapes for Gas, Kerosene and
Electric Light Purposes.

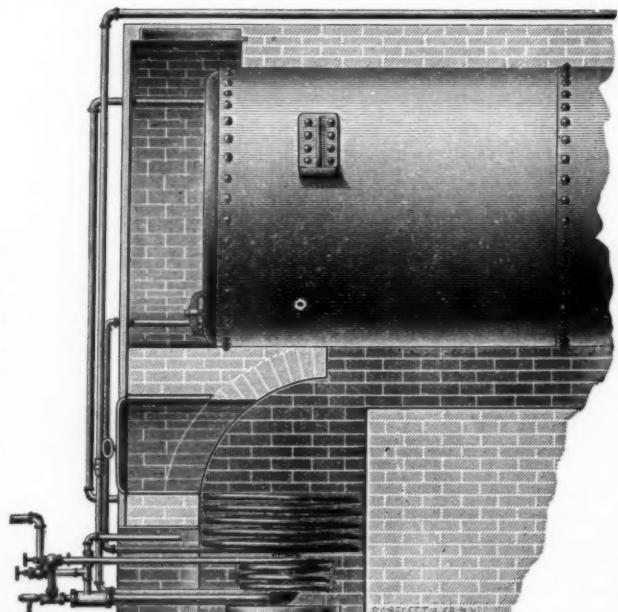
EMPIRE HYDRO-CARBON CO., 18 Exchange Pl., N. Y. CITY. MERIDIAN, CONN., Nov. 7, 1887.

DEAR SIRS—We have been using your Scory Burner for the last two weeks, and it has given us much satisfaction. From the present indications we believe it produces a greater heat with the use of less oil than any burner we have heretofore used. You now have an order from us to put in two more in our two other glory holes, which we trust you will execute without delay.

Very truly yours, JAMES J. MURRAY & CO.

TRUSTEES:

Ernest T. Fellowes, Pres't.
Andrew J. Constantine, V.P.
Samuel D. Bussell, Treas.
A. P. M. Roome.
Edwin M. Crawford.
James E. Miller, Sec'y.



NO. 230 LEWIS STREET, NEW YORK, October 26, 1887.

THE EMPIRE HYDRO-CARBON COMPANY, No. 18 Exchange Place, N. Y. City.
GENTLEMEN—We have been using one of your Hydro-Carbon Apparatus under one of our hoisting portable boilers for several months past, and it gives us entire and complete satisfaction. It is so simple in construction and so easily controlled that our engineer handles it without difficulty. At the price we pay for oil, it is more economical than coal, besides taking into consideration its being entirely free from ashes, soot, dust or smoke. We cheerfully recommend it.

Yours very truly,

CONSTANTINE & CO.

OFFICE OF THE ECLIPSE LUBRICATOR COMPANY,

Greenpoint Avenue and Newtown Creek,

EMPIRE HYDRO-CARBON CO.

GENTLEMEN—We take pleasure in stating that the oil burner which you placed under our boiler gives us entire satisfaction, doing all that you claim for it, and we consider it a decided success.

Yours, etc.,

ECLIPSE LUBRICATOR CO.—Chas. A. Miller.

Office, 18 EXCHANGE PLACE, - - NEW YORK.
Factory at EAST 23d STREET, - - NEW YORK.
Manufacture under 5 Letters Patent. Infringers will be proceeded against according to law.

TRADE NOTES.

THE Chalmers-Spence Co., of New York, have issued a descriptive pamphlet of their asbestos covering, packing, &c., for free distribution.

THE Vulcan Iron Works, Oswego, N. Y., manufacturers of steam shovels, report a growing demand for their excavators. They have just completed several new machines for work at the mines at Hazelton, Pa. These steam shovels do very effective work.

THE Van Dorn Iron Works, of Cleveland, Ohio, have one of the largest and finest plants for the manufacture of architectural iron work, fences, etc., in the country. They take contracts for jail and courthouse work and are fully up to the times in all their departments.

BRICK-MAKERS will find the 1888 catalogue of C. W. Raymond & Co., of Dayton, Ohio, of much interest. They are extensive manufacturers of brick machines and general supplies for brick-makers. The catalogue illustrates and describes many things essential to good brick-yards.

POST & CO., manufacturers of hand, foot and power machinery, of 154 Lake street, Chicago, state that among the many inquiries they have received, is one from Dublin, Ireland. They are making shipments to nearly all points of the compass, and the outlook is good for 1888.

THE Covert Manufacturing Co., of West Troy, N. Y., have published their 1888 catalogue and price-list, which will be found of much interest by all hardware and harness dealers. The variety of goods made by this company, such as bits, snaps, horse-ties, chains, hitching posts, &c., is something remarkable.

THE new patent steel car springs manufactured by the Cliff & Righter Co., Limited, of Oswego, N. Y., is a great improvement on the old style of car springs, and is destined to be adapted by nearly all the leading car shops at an early date. An illustrated descriptive circular and miniature model will be sent to interested parties who apply.

E. W. CURRANT, manager of the Holmes Burglar Alarm Telegraph Co., at Providence, R. I., has invented a simple device for suspending electric cables and wires. The arrangement is entirely automatic, and can be put up or detached in a moment. The support is broad and does not cut through the coating, and combines the additional qualities of strength, durability and cheapness.

THE Crosby Steam Valve Co., of Boston, have just completed a new factory, 125 by 45 feet, with an L, 70 by 46 feet, and three stories high. It is built of brick, and has all the modern appliances for extinguishing fire—a steam pump in the basement and sprinklers all through the building. It is constructed throughout with special reference to the health, convenience and comfort of the workmen, which is coming to be understood as the true method of economy in manufactures.

THE Rochester Machine Tool Works, Rochester, N. Y., report that the trade on the Acme Automatic Safety Engine grows most rapidly in the sections where it has been longest in use. They also report an increased demand for these engines separate from the boilers for use in driving electric light plants in river boats, etc. The sizes mostly used are 1, 2 and 4 horse-power. This enterprising firm are about to bring out a new boiler for use on government water in launches, &c. This boiler will be a rapid steamer.

THE Albany Steam Trap Co. have made a great success of their new duplex filter. It was brought out one year ago, and offered on its merit without any previous prestige. During this time they have sold 100, ranging in capacity from 5 to 250 gallons per minute, and, we are informed, they give entire satisfaction. The water on passing through comes out bright and sparkling and entirely free from all mechanical impurities.

THE Kingsford Iron Works, at Oswego, N. Y., have brought out a new automatic high-speed engine, which differs very materially from other engines of this class. It has few parts, is very simple in its construction, and is much heavier and stronger than any pattern heretofore adopted, being built for durability and hard, constant service, and yet are cheaper than most automatic engines. They are spoken highly of by those who have seen them in operation.

TO THE TRADE.

BALTIMORE, MD., Jan. 3, 1888.

Dear Sirs—We would notify you that the firm of Thomas K. Carey & Co., composed of Thomas K. Carey and A. Morris Carey, general partners, and James Carey, special partner, was dissolved on December 31st,

The firm of Thomas K. Carey & Bros., composed of Thomas K. Carey, James Carey, Jr., and A. Morris Carey, general partners, and James Carey, special partner, will succeed the above firm and continue the business of mill and machinists' supplies, machinery, and rubber goods for mechanical purposes, at the same place of business.

Respectfully yours,
THOMAS K. CAREY & BROS.

THE Hercules Iron Works, of Chicago, are energetically pushing their trade into all sections of the South. In addition to their Northern refrigerating trade, contracts were filled last season with the Lone Star Brewing Co. and Alamo Mills Co., both of San Antonio, Texas, and they are now building machines for Corsicana, Texas; Asheville, N. C.; Havre de Grace, Md.; San Antonio, Texas, etc. The entire machine is constructed complete in their own works, which are said to be the best equipped in the country.

In proof of their claim to have the strongest, most simple and most economical ice making machine yet devised, they show flattering testimonials from every customer who has purchased their machines since their introduction, three years ago. Illustrated circular sent upon request.

MR. W. B. BARRY, of the W. B. Barry Saw & Supply Co., of Indianapolis, has issued the following circular: "Having reorganized my business, I take this method of informing you that I begin the new year better prepared than ever before to turn out first-class work and to execute your orders more promptly. To those who have used or sold my saws I need to say but little as to the quality of my work, but I wish to assure all such that I will maintain the high reputation my goods have already attained, giving all departments my careful personal supervision. To those who have not used my saws I wish to say that all my work is fully warranted in every particular, and I respectfully solicit a trial order, that you may be convinced as to the merits of my claim.

My line of supplies will have the same careful attention as heretofore, and will consist of the best brands of belting, files, emery wheels, lace leather, etc., all of which will be furnished at the lowest market prices."

AN ENERGETIC FIRM OF MANUFACTURERS.—The enterprise of the Shultz Belting Co., a prominent local industry, was most excellently displayed a few days ago and in a way that could not be surpassed by any similar institution in the country. It seldom occurs that such a concern is offered an opportunity

to show what can be done on short notice, but the test came Saturday afternoon at three o'clock, when the Brush electric light plant was burned out, completely destroying all the belting of that extensive establishment. The consequence was that darkness hung over the stores of the company's patrons, and they began calling for electricity. There was no way of producing a current without belting, and as the sizes wanted were of such unusual dimensions none could be found in stock. Therefore the Shultz Belting Co. began that afternoon to manufacture belting from the leather which they had on hand. By working their forces night and day they succeeded in having the Brush plant in full operation again at three o'clock Monday afternoon. In the meantime, five double 12-inch, one double 20-inch, one double 24-inch, 210 feet of 12-inch, 72 feet of 20-inch and 72 feet of 24-inch leather belting was cut, made and fitted accurately to the electric pulleys. This is the quickest job ever accomplished in this line of manufacture, and is fully in keeping with the enterprise of the firm, which is second to none in the country. Its trade is represented by agents in all the principal cities of the United States, and the factories' products are shipped to France, Holland, Mexico, and even to Cairo, Egypt.—St. Louis Globe-Democrat.

Philadelphia Trade Notes.

THE Thorn Shingle & Ornament Co., at the corner of Twelfth and Callowhill streets, was incorporated December 19th. Mr. J. S. Thorn is president, and Mr. D. R. Harris, treasurer. The new company starts out with flattering prospects. Mr. Thorn recently purchased the property of the Philadelphia Smelting Co., at the corner of Twelfth and Willow streets. The lot has an area of 54x190 feet, and cost \$30,000. A handsome six-story factory to cover the entire lot is contemplated, to which the company will remove its quarters when the structure is completed.

THE Energy Manufacturing Co. last week received an inquiry from Sweden for their rope hoist. Recent orders are from Lobdell Car Wheel Co., Wilmington, Del.; G. W. Helms, Winchester, Ind.; W. P. Brewer, Birmingham, Ala.; Speers Wadding Co., Memphis, Tenn.; Benjamin A. Stevens, Toledo, O.; James A. Bedell, Suffolk, Va.; Williams, Tanner & Co., Fort Plain, N. Y.; Benedict & Burnham Manufacturing Co., Waterbury, Conn.; W. G. Ricker, Rochester, N. Y.; Canadian Pacific Railway Co., Montreal, Canada, and many others. The firm has prepared neat and complete descriptions of their wares, which are sent out on application to the office, 1115 South Fifteenth street.

BUTOLETTE & LUKENS now have twenty-three machines at work making steel wire nails.

THE Vulcan Iron Works are about to remove their office headquarters from 34 South Second street to the works at Chester. Continual improvements are being made, and it has been found desirable to concentrate the force. The capacity of the works has been enlarged.

Speed on Southern Railroads.

The Queen & Crescent Route, running trains from Cincinnati to New Orleans and Shreveport, La., and passing through Chattanooga, Birmingham, Tuscaloosa, Meridian, Jackson and Vicksburg, has, with its "Queen & Crescent Limited Express," reduced the time between Cincinnati and New Orleans (827 miles) to twenty-five and a half hours. This train leaves Cincinnati at 7:55 A. M., and arrives at New Orleans at 9:30 next morning.

SIX CENTS ISN'T MUCH! But it will buy the neatest, best, most accurate and satisfactory guide-book of New York City ever issued—128 pages and map. 50,000 of these already issued. Send six cents in stamps to Advertising Department, Grand Union Hotel, New York.

Important.

When visiting New York city, save baggage express and carriage hire, and stop at the Grand Union Hotel, opposite Grand Central Depot.

600 handsomely furnished rooms at \$1 and upwards per day. European plan. Elevators and all modern convenience.

Restaurants supplied with the best. Horse cars, stages and elevated railroads to all depots. You can live better for less money at the Grand Union Hotel than any other first-class hotel in the city.

THE American House, Boston, needs no recommendation to the generality of travelers, but it may not be amiss to inform those who are contemplating their first visit to the "Hub" that no hotel in that city is better than the "American." It is conveniently located to all lines of travel as well as the business portion of the city, and no effort is spared to maintain the high rank the house has held so long.

THE Palace Hotel, Cincinnati, Ohio, is said to enjoy the reputation of being the best \$2 hotel in America. 250 rooms; 140 front rooms. All conveniences and excellent cuisine.

THE St. Charles Hotel, at Lowell, Mass., kept by Geo. R. Cushing, is the place for comfortable entertainment. Travelers will do well to keep it in mind.

WESTPHAL'S IMPROVED REVOLVING SCREW, BOLT AND SHOT CASES. ADJUSTABLE FIRE BACKS AND LININGS FOR COOK STOVES. IRON STORM THRESHOLDS. SEND FOR ILLUSTRATED CIRCULARS SCHENCK'S ADJUSTABLE FIRE BACK CO. 94 MARKET STREET, CHICAGO.

THE KRIEBEL BOAT ENGINES WITH UPRIGHT OR HORIZONTAL BOILERS. UP TO 20 HORSE POWER RICE & WHITACRE MFG. CO. CHICAGO.

STEFF PIANOS THE BEST.

Offices and Warehouses, 9 E. Liberty Street, BALTIMORE, MD.

For the Latest Improved FAST FEEDING

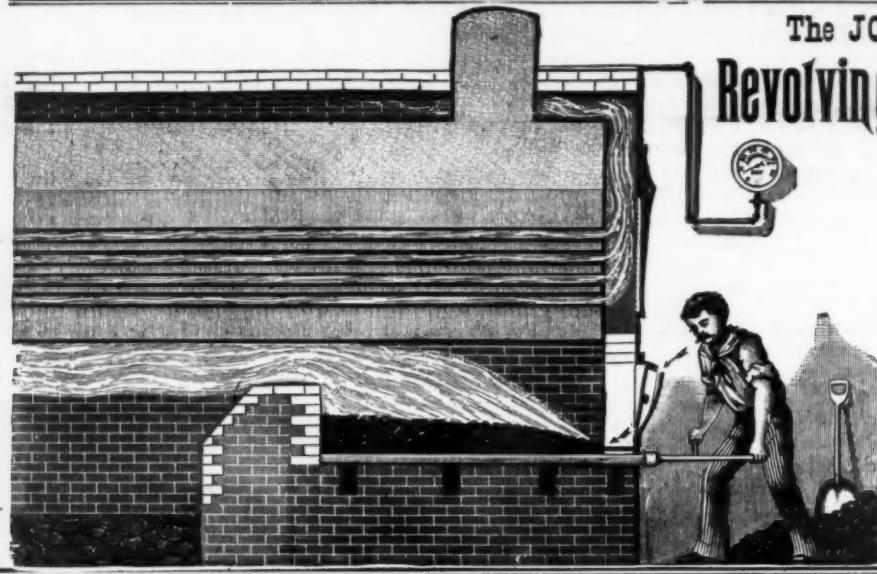
Planing Mill Machinery,

ADDRESS THE

Preble Machine Works Co.,

CHICAGO, ILL.

PERFORATED METAL FOR COTTON SEED OIL MILLS & RICE MILLS MINING SCREENS & THE ROBERTAITCHISON PERFORATED METAL CO. 16 Van Buren St. Chicago, Ill.



The JOHN ASHCROFT Patent TRIANGULAR Revolving Steel Grate Bars & Furnace Doors

Eight per cent. in coal saved by the use of these Doors and Steel Bars guaranteed.

These Steel Bars last four times longer than any cast-iron bar ever made.

Sectional View of Steam Boiler, fitted with John Ashcroft Patent Furnace Door and Triangular Revolving Steel Grate Bars.

Fireman cleaning fires by shaking and revolving the bars, which thoroughly frees the furnace from ashes, and prevents the formation of clinkers, without the use of fire tools or opening the furnace door.

RESULT.—Increase of steam and a saving of coal, and no injury to the boiler by cold air impinging on the boiler shell.

By this operation a saving of 8 per cent. is secured.

FOR INFORMATION AND PRICES, ADDRESS

**The John Ashcroft Patent Grate,
Bar and Furnace Door Man'g Co.
No. 73 Gold Street, New York.**

P. O. BOX 100.

• ESTABLISHED 1850. •

To the Stove and Hardware Trade:

THE LIGHTNING ROD TRADE has undergone a change in the past few years. Formerly men with wagons traveled over the country, but now these men have almost disappeared. The business of erecting rods on houses has passed into the hands of tinsers, hardwaremen and builders, and we simply manufacture them at wholesale for this class of dealers.

**Munson Lightning Conductor Co.
Indianapolis, Ind.**

The people in each locality prefer patronizing a home firm, and you can just as well sell them their Lightning Conductors at the same time you are doing the tin or roofing work. We furnish printed directions, so that any one can put them up without difficulty. We also manufacture all kind of

WEATHER VANES, CLASS BALLS, &c.

These Conductors have received the Highest Indorsements ever issued on this class of goods, and are therefore standard. Write for prices and inclose 10 cents in stamps for samples.



"OSGOOD" U. S. STANDARD SCALES.

3 TON, \$35.00.

Other Sizes Proportionally Low.

Fully Warranted. x Sent on Trial. x Freight Paid.

Illustrated price-lists free. Agents well paid.

OSGOOD & THOMPSON,
BINGHAMTON, N. Y.

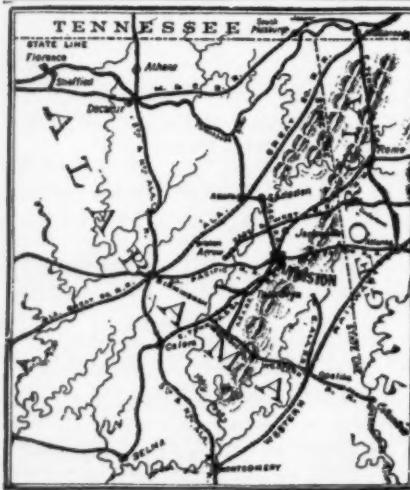
* COLT'S NEW LIGHTNING * 22 Calibre Rim Fire Magazine Rifle.



THE MOST PERFECT LITTLE GUN OF THE AGE

For Small Game, Gallery, Target Practice and Snap Shooting, it is unrivaled. It is light, durable and safe. Weight 5½ pounds. The ammunition is cheap—100 shots for 50 cents. For circulars giving full description and price, also for "IDEAL RELOADING TOOLS," address

IDEAL MANUFACTURING CO.
P. O. BOX 1064, C. NEW HAVEN, CONN.



First National Bank, Anniston, Ala.
Col. John M. McKerrow, Pres't. Anniston City Land Co.

* LEDBETTER & CO. LAND AND LOAN ASSOCIATION. Incorporated.

Commission Dealers in

Lands, Stocks and Bonds.

—CITY AND MINERAL PROPERTY—
A SPECIALTY.

Capital Stock
\$100,000 CORRESPONDENCE
SOLICITED.



ANNISTON, ALA.

REFERENCES:

Right Rev. Hugh Miller Thompson, D. D.; Bishop J. C. Keener, D. D.; Rev. B. M. Palmer, D. D.; Rev. I. L. Leucht; Hon. R. L. Gibson, Senator U. S.; Hon. E. J. Gay, Representative U. S.; Hon. Louis Bush of Bush & Leverett; Col. Wm. Preston Johnston, President of Tulane University; H. Dudley Coleman, Esq., President of Chamber of Commerce; Isidore Newman, Esq., President of Stock Exchange; R. M. Walmsley, Esq., President of Cotton Exchange; Joseph C. Morris, Esq., President of Canal Bank; Albert Baldwin, Esq., President of N. O. National Bank; Geo. Q. Whitney, Esq., of Whitney National Bank; Generals E. C. Walthall and J. T. George, U. S. Senators for Miss.; Hon. H. L. Muldrow, Asst. Secy. Interior; Gen. S. D. Lee, Mississippi.

D. L. MITCHEL.

D. L. MITCHEL & CO.
Real Estate,
Loan and Information Bureau,

59 Carondelet Street, New Orleans, La., U. S. A.

M. B. HILLYARD.

Special attention given to developing Southern industries, procuring money for promoting Agricultural, Mechanical and Transportation interests, and imparting information to capitalists, as well as all seeking investments in Southern lands.

Northern manufacturers and money lenders will find it to their advantage to confer with us, as well as all persons requiring information as to plants for Cotton Mills, Sugar Mills, Saw and Planing Mills, Foundries, Car Shops, Creameries, Canneries, Tanneries, Brickmaking, etc., etc.



The VICTOR TURBINE

Possesses more than Double the Capacity of other Water Wheels of same diameter, and has produced the Best Results on Record, as shown in the Following Tests at Holyoke Testing Flume:

Size of Wheel.	Head in Ft.	Horse Power.	Per Cwt. Useful Effect.
15-inch.	18.00	30.17	.000
17½-in.	17.98	30.00	.000
20-in.	18.21	40.00	.000
25-in.	17.50	50.00	.004
30-in.	11.85	52.04	.070

WITH PROPORTIONATELY HIGH EFFICIENCY AT PART-GATE.

Such results, together with its nicely-working gate, and simple, strong and durable construction, should favorably recommend it to the attention of ALL discriminating purchasers. These wheels are of very Superior Workmanship and Finish, and of the Best Material. We also continue to manufacture and sell at very low prices the

—ECLIPSE DOUBLE TURBINE.—

So long and favorably known. State your requirements, and send for Catalogue to the

STILWELL & BIERCE MFG. COMPANY
DAYTON, OHIO, U. S. A.

STEEL RAILS
COMPLETE OUT-
FIT FOR
Logging, Mining and Plantation
RAIL AND TEAM ROADS.
Light Sections Rails and Spikes in stock.
Locomotives, Logging Cars, etc.
NEW AND SECOND HAND.
HUMPHREYS & SAYCE,
OFFICE NO. 1 BROADWAY, N. Y.

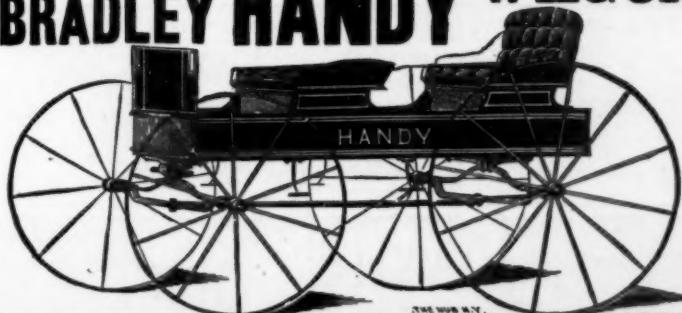
Carley's CIRCULAR
Saw Mill A. C. POWELL & SON,
SYRACUSE, N. Y.
The Cheapest and Best Mill
FOR THE MONEY IN
THE MARKET.
Prices, \$250 to \$600.
Write for terms and
Description.

A NEW Steel Roofing Bracket FOR SHINGLE ROOFS.

This can be fastened to any roof without injuring it and without loss of time. It is self-adjusting, has double support, and impossible to break or slip. It will last a life-time and is just the thing for carpenters and builders. Send for circulars to

R. B. THOMAS, 90 Chambers St.,
New York.

THE BRADLEY HANDY WAGON



The Best on Wheels. Light, strong, convenient, and low priced. Handy to get into and out of. Handy for single horse or pair. Handy for one person or more. Handy to load or unload. Send for free circular "How to purchase direct from Manufacturer."

SYRACUSE, NEW YORK, OR
52 MURRAY ST., NEW YORK.
32 S. MARKET ST., BOSTON.

BRADLEY & CO.

H. W. JOHNS' ASBESTOS

PLASTIC STOVE-LINING.

One of the most desirable articles for the household ever produced. Easily applied by any one at less than half the cost of brick linings, while it is far more durable.

Only one half the thickness of ordinary fire-brick is required, leaving more space for fuel. Suitable for all kinds of Stoves, Ranges and Furnaces.

Ready for use in 5 and 10 pound cans, also in Kegs and Barrels.

ASBESTOS COVERING.

For Furnaces, Furnace Pipes, etc.

Fire-Proof, Non-Conducting—

33 per cent. of Fuel saved.

Descriptive Price List free by mail.

H. W. JOHNS MFG CO.,
87 MAIDEN LANE, NEW YORK.
CHICAGO, PHILADELPHIA, LONDON.



THE CLEVELAND WROUGHT IRON FENCE

FENCING AND RAILINGS,
STABLE FITTINGS,
STATION HOUSE CAGES,
CRESTINGS AND TERMINALS,
Correspondence solicited.

LAWN SKIRTS, VASES,
JAIL AND STRUCTURAL IRON WORK.
Van Dorn Iron Works,
Cleveland, Ohio.

WALMSLEY'S DEVICE

For Raising and Supporting the Guide Board or Ring Frames and Twisters. In Fall River alone it is used on over 400,000 spindles, or 97 per cent. of all the ring frame spindles in the city. Outside of Fall River its use is scattered from Maine to Delaware, over 400,000 more. Any one can put them on, being very simple, and its cost nominal.

For prices and information please address

R. WALMSLEY, FALL RIVER, MASS.
Patented Jan. 26, 1886.

HOWELL'S PATENT

Rain Water Cut-Off.

For turning the water into or off the Cistern by merely moving the lever from one side to the other. It is made of tin, and is light, cheap and durable. Write for circulars and prices to the manufacturer. Mention this paper.

G. W. HOWELL, Covington, Ky.

SAFES

We manufacture a line of Fire Proof Safes that combine all the modern improvements and meet with ready sale among business men and dealers of all kind.

Any business house can handle our Safes in connection with any other line of goods without additional expense or interference with any other business.

Weight. Inside Measure. Outside Measure. Retail Price.
No. 2, 250 lbs. 12x8x8½ in. 22x14x18 in. \$80
No. 3, 500 lbs. 15x10x10 in. 28x18x18 in. 25
No. 4, 700 lbs. 18x14x12 in. 32x22x18½ in. 45
Liberal Discounts to Trade.

ALPINE SAFE CO., Cincinnati, O.

E. W. BLISS CO.

Plymouth, Pearl, John and Adams Sts.

OFFICE: 17 Adams Street.

BROOKLYN, N. Y.

Presses, DIES AND

Special Machinery,

FOR

Sheet Metal Workers.



Cam Toggle and Drawing Presses, Power Presses, Foot Presses, Automatic Drop Presses for Forging and Stamping, Double Seaming Machines for round, square and oval work, Circular Shears, hand and power; Squaring Shears, foot and power; Canning Machinery, Dies of every description, Tools for working Sheet Metals, Petroleum Can Machinery, Special Machinery. Send for Circulars.

NIAGARA STAMPING & TOOL CO.

MANUFACTURERS OF

Tinners' Machines & Tools,

FOR WORKING SHEET METALS, &c.



Canners' Outfits.

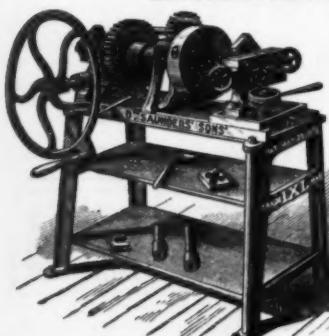
Squaring & Circle Shears, Presses, &c.

Superior, Cor. of Randall St., Buffalo, N. Y.

Write for our Catalogue and Price-List. Please mention this paper when writing.

D. SAUNDERS' SONS,

MANUFACTURERS OF THE ORIGINAL



TRADE I.X.L. MARK.

Pipe Cutting and
Threading Machine.

BEWARE OF IMITATIONS.
None genuine without our Trade
Mark and name. Also

Patent Wheel Pipe Cutter
STEAM AND GAS FITTERS'
HAND TOOLS.

Pipe Cutting and Threading Machine
For Pipe Mill Use a Specialty.
Send for Catalogue B.

YONKERS N. Y.

BELLOWS, FORGES,

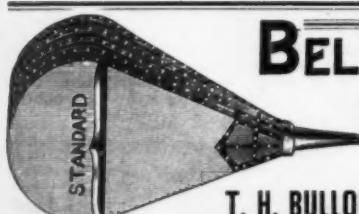
Tools for Blacksmiths, Wagon

AND BOILER SHOPS.

T. H. BULLOCK BELLOWS & FORGE CO.

CLEVELAND, OHIO.

Write for Prices.



Horse and Mule Jewelry,

Consisting of COVERT'S PATENT SNAPS,

Chain and Web Goods.

These goods have become standard with the trade, and are sold by all the leading Jobbers in General and Saddlery Hardware in the United States at manufacturers' prices.

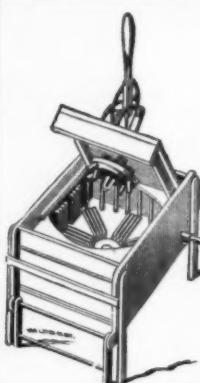
Covert Manufacturing Co. West Troy, N.Y.

"THE OLD AND ONLY RELIABLE"

LATEST IMPROVED FORT WAYNE

WESTERN WASHER.

SOLD ENTIRELY ON ITS MERITS.



We have furnished these machines to an appreciating public for the past twelve years, during which time the demand for them has increased steadily and rapidly.

Each Machine is Warranted to give Perfect Satisfaction

We want this machine represented in every city and town, and will give liberal discounts to dealers, and will guarantee the sale and satisfaction of them. Price, No. 1 Family Size, \$8; No. 2, Large Family, \$9; No. 3, Hotel Size, \$10. Write for Catalogue and Terms to the

HORTON MFG. CO., Fort Wayne, Ind., U.S.A.

SOFT WOOD WHEELBARROW.



* Champion King. *

Smooth, Neat and Durable.

THE WHEEL
Is half the Wheelbarrow.

Our Wood and Iron Center Wheels are the best that were ever used in a Wheelbarrow. They are made as follows: 18 inches in diameter; Lumber, bone dry; Tire put on hot; Painted. We pride ourselves in the fact that while our prices are low, very low, the standard of quality is high, very high. Write for Catalogue and Prices.

THE BRYAN MFG. CO., Bryan, Ohio.

STEARNS' NEW DOOR CLAMP.

FURNISHED COMPLETE

WITH WOOD

AT HALF PRICE

OF OTHERS

E.C. STEARNS & CO.

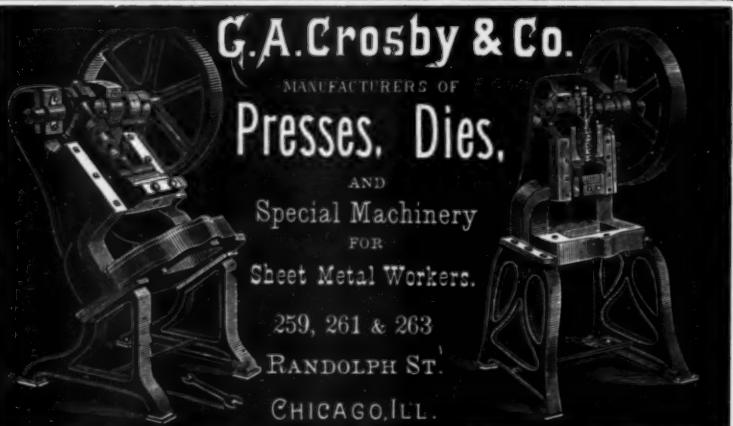
SYRACUSE, N.Y.



SEND FOR

CIRCULAR F

FOR SALE BY THE TRADE.



G.A. CROSBY & CO.

MANUFACTURERS OF

Presses, Dies,

AND

Special Machinery

FOR

Sheet Metal Workers.

259, 261 & 263

RANDOLPH ST.

CHICAGO, ILL.

Henry Leschen, President. Edward M. Vossler, Vice-President. John A. Leschen, Sec'y and Treas.

A. LESCHEN & SONS ROPE CO.

MANUFACTURERS OF



STEEL WIRE ROPE IRON

903 & 905 N. Main Street,

ST. LOUIS, MO.

→ HARDWARE. ←

Baltimore WHOLESALE Prices.

	ANVIL.	BRACKETS.
Eagle and Vulcan	\$ D. 10 c. dis sof	dis 50c
Wright's	92c	dis 50c
Armitage's Mouse Hole	pc	dis 50c
Trenton	sof	dis 50c
Wilkinson's	sof	dis 50c

AUGERS AND BITS.

Conn. Valley Mfg. Co.	extra, 60c to \$	9 d.
Douglas Mfg. Co.	No. 1, 60c to \$	9 d.
Ives	dis 55c to \$	9 d.
Cook's Douglas Mfg. Co.	dis 55c to \$	9 d.
Griswold	dis 50c to \$	9 d.
Patent Solid Head	dis 25c	9 d.
Russell Jennings' Auger, Dowell, Machine	dis 50c to \$	9 d.
Dowel and Hand Rail Bits	dis 50c to \$	9 d.
Ives' "Jennings" Bits	dis 50c to \$	9 d.
Expansive Bits, Clark's small, #8; large,	dis 35c	9 d.
Expansive Bits, Ives'	dis 45c	9 d.
Expansive Bits, Blake's	dis 40c	9 d.
Hollow Augers, Ives'	dis 25c	9 d.
Hollow Augers, Douglas'	dis 25c	9 d.
Hol. Aug., Bonney's Adjust.	dis 25c	9 d.
Hol. Aug., Stearns' Adjust.	dis 25c	9 d.
Hol. Aug., Ives' Expansive, each	dis 25c	9 d.
Hol. Aug., Universal Expansive, each	dis 25c	9 d.
Wood's	dis 25c	9 d.
Gimlet Bits	75c to \$ gross	9 d.
Gimlet Bits, Diamond	dis 50c	9 d.
Double Cut Gimlet Bits, Shepherdson's	dis 40c	9 d.
Double Cut Gimlet Bits, Douglas'	dis 40c	9 d.
Double Cut Gimlet Bits, Ives'	dis 40c	9 d.
Morse's Bit Stock Drill	dis 50c	9 d.
L'Hommedieu's Ship Augers	dis 25c	9 d.

AWL HAFTS.

Sewing Brass Ferrule	.35c to .50c gross	dis 40c to \$
Patent Sewing, Short	.35c	dis 40c to \$
Patent Sewing, Long	.35c to .50c	dis 40c to \$
Patent Peg, Plain Top	.35c	dis 40c to \$
Patent Peg, Leather Top	.35c	dis 40c to \$

AWLS, READ AWLS, &c.

Avis, Sewing, Common	1.75	dis 35c
Avis, Shouldered Peg	1.45	dis 40c
Avis, Patent Peg	1.35	dis 40c
Avis, Shouldered Brad	1.35	dis 40c
Avis, Handled Brad	1.35	dis 40c
Brad Sets, Aiken's	1.35	dis 40c
Brad Sets, No. 45, \$10.50	1.35	dis 40c
Brad Sets, No. 43, \$12.50	1.35	dis 40c
Brad Sets, Stanley's Exc. No. 1, \$19.50	1.35	dis 40c
Brad Sets, Stanley's Exc. No. 2, \$24.50	1.35	dis 40c
Brad Sets, Stanley's Exc. No. 3, \$28.50	1.35	dis 40c

AXES.

Collins & Co.	\$.75 to .90	bevelled
Lippincott & Mann's		
Single Bit, 4 1/2 to 5 1/2 and under	\$.75 to .95 net	
Single Bit, 5 1/2 to 6 and over	\$.75 to .95 net	
Single Bit, bevelled	\$.75 to .95 net	advance
Double Bit, 4 1/2 to 5 1/2 and under	\$.75 to .95 net	advance
Double Bit, 4 1/2 to 6 and over	\$.75 to .95 net	advance
Double Bit, bevelled	\$.75 to .95 net	advance
Second quality Axes	75c	less than above

AXLES.

Sheldon & Co., iron	\$.55c off
" " steel	\$.55c off
AXLE GREASE—Fraser's	\$.50

BALANCES.

Spring Balances	dis 50c
BELL.	

Hand, Light Brass	dis 70c
Hand, White Metal	dis 60c
Hand, Silver Chime	dis 80c to \$
Hand, Globe (Cone's Patent)	dis 80c to \$
Gong, Abber's	dis 80c to \$
Gong, Yankee	dis 40c to \$
Leon Reading	dis 25c to \$
Pull, Brook's	dis 20c to \$
Crank, Taylor's	dis 20c to \$
Lever, Sargent's	dis 20c to \$
Bloomfield	dis 20c to \$
Lever, R. & E. M. 's	dis 45c to \$
Call	dis 40c to \$
Cow, Common Wrought	dis 35c to \$
Cow, Western, Sargent's List	dis 30c to \$
Cow, Kentucky, Sargent's List	dis 30c to \$
Cow, Moore's or Dodge's, Genuine Ky., new list:	
Mo. o 1 1/2 2 3 5 5 6 Hog	dis 30c to \$
Mo. o 1 1/2 2 3 5 5 6 Hog	dis 30c to \$
Cow, Texas "Star"	dis 30c to \$

BELLOWS.

Blacksmith's Common	dis 50c to \$
Molder's	dis 50c
Hand Bellows	dis 50c

BLIND FASTENERS.

Francis	dis sof
Mackrell's	3 doz pairs \$1.00, dis 20c
Van Sand's Screw Pattern	\$15.00 gross, net, dis 60c
Van Sand's Old Pattern	\$15.00 gross, net, dis 55c
Merriman's	new list, net
Zimmerman's, 10d in	dis 33c
Zimmerman's, 9 in	dis 30c

BLIND STAPLES.

Barbed, 1/4 in. and larger	\$.75 to .90 net
Barbed, 3/4 in.	\$.75 to .90 net

BLOCKS.

Penfield Blocks	dis 30c
Bagnall & Loud	dis 30c

BOLTS.

Cast Iron Barrel Shutter, &c.	dis 70c
Cast Iron Chain (Sargent's list)	dis 60c to \$
Wrought Bars	dis 70c
Wrought Shutter, Brass Knob, Stanley's list	dis 70c to \$
Wrought Shutter, Sargent's list	dis 70c to \$
Wrought Sink Fush, Sargent's	dis 50c to \$
Wrought Sink Fush, Stanley's	dis 50c to \$
Wrought B. & F. Fush, Stanley's	dis 50c to \$
Carriage and Tire, Common, new list	dis 70c
Carriage and Tire, Philadelphia Pattern	dis 75c to \$
Carriage Bolts, Clarke's	dis 70c
N. R. & W. Carriage (old list)	dis 70c
Tire, American Screw Co.'s, Phila.	dis 50c
Tire, "Bay State"	dis 50c
Eagle Philadelphia Tire Bolt	dis 50c
Stove	dis 50c
Flue	dis 50c
Machine	dis 70c to \$
Solt Ends and Lag Screws	dis 70c to \$

BORAX.

BRACE.

O. S. Backus	dis 50c
Barber's	dis 50c
Spooffard's Patent	dis 50c
Ives' Patent Braces	dis 50c
Common Ball (American)	dis 50c, net
Amidon's	dis 40c

BORING MACHINES—WITHOUT AUGERS.

Sweet & Clark upright, s. 50 angular	3.00 net
Leverson	3.00
Unicard	3.00

3 d. Fine.

3 d.

3 d. Com.

8 d.

3 d. Fine.

3 d.

3 d. Com.

8 d.

3 d. Fine.

3 d.

3 d. Com.

8 d.

THE MARKETS.

OFFICE MANUFACTURERS' RECORD,
BALTIMORE, Jan. 18, 1888

There is a general improvement reported in business circles, and the easier money market is having the effect of causing increased activity in all industrial lines throughout the South. The great diversity of new enterprises that are being organized is especially noticeable. While iron industries are being pushed with unabated vigor, there is more activity in cotton mill building and enlargements than ever before. Mills are in many cases running night and day, and even then are unable to keep up with their orders.

Trade is fairly good in manufactured iron at former prices, though a little stiffening is reported. We quote:

Ref. Bar Iron, 1 to 6x36 to 1...	\$ 2.10@ 2.40c
" " 1 to 4x21½ to 1...	\$ 2.10@ 2.40c
" " ¾ to 2, round and square...	" 2.10@ 2.40c
Hoop Iron, ½ wide and upward...	\$ 2.50@ 3 c
Band Iron, from ½ to 6 in. wide...	\$ 2.40@ 2½ c
Horseshoe Iron...	3 @ 3½ c
Norway Nail Rods...	4½@ 5½ c
Black Diamond Cast Steel...	2½@ 9 c
Machinery Steel...	3 @ 4½ c
Spring Steel...	3½@ 4 c
Common Horse Nails...	3½@ 3 c
Railroad Spikes, 5½x9-16...	3½@ 4 c
Steel Boiler Plate...	3½@ 4 c
Iron Boiler Plate...	3½@ 4 c
Boiler Tubes...	50¢ off list

The demand for pig iron is without noticeable change. Steel rails are held firm, as heretofore, at \$32@33. Baltimore Charcoal Wheel Iron (all Baltimore ore)..... \$58 00@82 00
Virginia C. B. Charcoal Wheel Iron... \$7 00@22 00
A. thracite, No. 1..... \$7 00@22 00
" " 3..... 16 00@18 00
" Mottled and White..... 14 00@15 00
Old Rails..... 12 00@23 00
Old Steel Rails..... 10 00@22 00
No. 1 Wrought Scrap..... 18 00@19 50

HARDWARE.

Since our last report there has been a very decided increase in the volume of business, and although in most lines there has been but little, if any, appreciation in values, a good feeling prevails among the manufacturers and larger dealers, and with the almost certain rapid increase of trade, goods will be scarce, and consequently of greater value. The lock manufacturers have another meeting this week, and will make a strong effort to reconcile existing conflicting elements, and secure the greatly to be desired harmony of action necessary to prosperity. Common carriage bolts have been advanced to 70 and 10 per cent. as the invoice price, but with the larger quantity rebates. Net the same as on the 70 and 15 per cent. basis.

COVERT MANUFACTURING CO's revised discounts January 1, 1888:

Disc't Per Cent.

Loop Harness Snaps.....	50
Round Eye Snaps.....	60&10
No. 38 Round Eye Snaps.....	60&10
"New" Loop Harness Snaps.....	50&5
"New" R. E. Harness Snaps.....	60
Martingale Loop Snaps.....	50
Snap 1" Thimble.....	60&10
"New" Snap and Thimble.....	60&10
Thimbles.....	60
Round Eye Swivel Snaps.....	60
Loop Swivel Snaps.....	60
Heavy 1" Swivel Snaps.....	60
"Giant" Open Eye Snaps.....	35
Open Eye Snaps.....	50&10
"New" Open Eye Snaps.....	50
Double Snaps.....	50
Combined Bit and Snaps.....	35
Lather Horse Tie.....	50
Strap Eyes.....	50
Horse Tie, Snap and Thimble (Jute).....	60&10
Horse Tie, Snap and Thimble (Hemp).....	50
Cattle Tie, Snap and Thimble (Jute).....	60&10
Cattle Tie, Snap and Thimble (Hemp).....	60&10
Horse Tie, "New" Snap and Thimble, (Jute).....	60&20
Cattle Tie, "New" Snap and Thimble, (Jute).....	60&20
Lariat Lether.....	50
Picket Pins.....	60
Horse Tie, O. K., (Jute).....	60&20
Cattle Tie, O. K., (Jute).....	60&20
Web Horse Tie.....	50
Rope Halter, ½ inch, (Jute).....	50
Rope Halter, ½ inch, (Hemp).....	40
Rope Halter, 7/16 inch, (Jute).....	60&10
Adj. slate Kite Halters.....	35
Halter Leads, (Hemp).....	50
Halter Leads, (Jute).....	60
Halter Leads, (Jute) "New" Snap Gentlemen's, Hitching Cord.....	60&10
Weight Cord.....	35
Hitching Weight.....	35
Driving Reins.....	40
Hammock Ropes.....	60&20
Flexible Curry Comb and Sweat Scraper.....	35
Balling Iron.....	35
Adjustable Web Halter.....	35
Web Halter.....	35
Bull Leads.....	35
Bull Snap.....	35

Soldering Irons.....	35
Soldering Copper.....	35
Bristle Card.....	35
Hitching Post.....	35
Rod Post Hitcher.....	60&20
Care Breech End Irons.....	35
Care Breaching Chains.....	50
Halter Chain.....	60
Rein Chain.....	60
Breast Chain, Short Snap.....	50
Lenthening Snaps.....	35
Open Eye Breast Chain Snap.....	35
Breast Chain, Long Snap.....	50
Post Chain.....	60
Breast Chain, New Patent.....	50
Centre Breast Chain Snap.....	35
Wheelbarrow Wheels.....	35

THE Shepard Hardware Co., of Buffalo, N. Y., have issued the following: "We beg to advise you that we are now offering for sale the "Lightning" ice cream freezer, quadruple motion. This freezer is, we believe, better than any heretofore manufactured. Using our new wheel dasher we are enabled to freeze quicker, more easily and make more ice cream from a given quantity of cream than can be done with any other freezer. The revolving dasher, as it turns, forms a vacuum in the freezing cream from the top to the bottom of the can, which fills with air and is beaten in the cream, making it very light and palatable, and greatly increases the quantity put in the can. Some of the additional points of merit are as follows: Hinge top, complete covering for gearing, self-adjusting scraper, strong tub (extra large) made of best quality cedar, bound with galvanized hoops, can be revolved after dasher has been removed if desired. Workmanship and material of the best quality. In fact, the best freezer made.

Price-List.
2 quarts..... \$3.75 6 quarts..... \$ 7.00
3 " 4.50 8 " 9.00
4 " 5.50 10 " 11.00
14 quarts \$14.00.

Philadelphia Iron Market.

PHILADELPHIA, Jan. 17, 1888.

The probabilities point to a higher range of prices in pig iron, and that too in the face of a declining tendency in merchant bars and other kinds of rolled iron. The reason is, that furnace men and mill men are not altogether certain that their supply of coal will continue, or even coke. The effort to bring about arbitration seems to have altogether failed. There is a fresh rumor every hour or two on the streets, but nothing that points to a solution of the present threatening difficulty. It is intimated that the miners' organization will call out the Wyoming region. The rumor is renewed that the Clearfield men may strike. So in the face of all these uncertainties it is impossible to make any statement of value with regard to the probable course of iron. Some Southern and Western iron is arriving, and contracts are being placed for it for future delivery. To-day's quotations are \$21 to \$22 for No. 1; \$19 to \$19.50 for No. 2; \$17 to \$17.50 for gray forge. There is some little improvement in bar iron with a certain class of people who are always purchasing only from week to week. A great many of these buyers have run out, and are now in the market. There is a good demand for muck bar, plate iron and steel plate, and a good deal of inquiry for skelp iron at 1.95. Plates are a little higher, namely, 2.20; former price 2.10. Angles are 2.30 to 2.40. A good deal of inquiry has developed itself within a week for angles, beams and channels. Steel rails are dull; sales so far this year about 225,000 tons; quotations firm at \$32 to \$33 at mill. Old material is more active; \$22.50 is the asking price for T's. No. 1 scrap is \$22.50. A great deal of scrap is wanted, and yards are empty, owing to the fact that it is difficult to obtain fresh supplies on account of the cold weather. Iron and steel making is generally a little higher on account of the season, but the consumers do not feel like paying more on account of the uncertainties growing out of the coal strike. The situation apart from the strike is strong. There is, of course, some apprehension that the coming season may not develop as much business as the last, but the iron trade and the buyers are not borrowing trouble on that score.

Our BELTING
is tanned on the surfaces
only; the
INTERIOR is RAW HIDE.

FOR SALE CHEAP.

One No. 6 Buffalo Forge, with water tank for power; new.
One No. 1 Keystone Forge; second hand.
Two No. 1 Delamater Pressure Pumps, 1-inch suction, 1½-inch discharge; new.
One No. 5 Blake Pressure Pump, ½-inch suction, 2-inch discharge; second hand.
One Power Boiler, Plate Punch, punches ½-inch hole; second hand.
One 32-in. by 32-in. by 9 ft. Bed Planer; second hand.
One 12-inch Shaper, New Haven Co.'s make; used one month.
Complete Steam Laundry outfit; used 3 months.
One No. 6 Friedman Injector.
One 2-horse power Lawson Gas Engine.
One Combined Engine and Boiler, 3 horse power.
One 2-horse power Vertical Engine.
One 5-horse power Vertical Engine.
One 8-horse power Vertical Engine.
One 6-horse power Vertical Marine Engine.
One 15-horse power Horizontal Engine and Boiler.
One 25-h.p. Portable Engine and Boiler, on skids.
One 8-horse power Horizontal Engine and Vertical Boiler combined.
One 8-horse power Yacht Boiler.
One 12-horse power Vertical Boiler.
One 15-h.p. Vertical Boiler, with submerged tubes.
One 50-horse power Stationary Tubular Boiler.
One lot of 60-horse power Automatic Engine.
One latest patent Quilter; second hand.
One Beater and Lapper; second hand.
One 32-inch Picker; second hand.
Four 32-inch Cotton Cards; second hand.

MACHINIST AND MILL SUPPLIES.

WM. C. CODD,
2010 and 2012 Aliceanna Street,
BALTIMORE, MD.

SELLING OUT.

We are offering our ENTIRE STOCK of

Machine Tools
SHAFTING, &c.,

at prices below factory cost, preparatory to CLOSING OUR BUSINESS in February.

Send for our lists before purchasing your Tools elsewhere, and save money.

FRASER & ARCHER,

121 Chambers Street,
NEW YORK

FOR SALE.

20-in. 1 Beater Breaker Lapper. 1 English.
25 ½-in. 1 Beater Finisher Evener. 1 English.
36-in. 3 Beater Kitson, with prepairo.
36-in. 3 Beater, Whiting's.
36-in. 3 Beater, Whiting's.
30-in. 2 & 3 Beater, Whiting's.

All this machinery is first-class. For further particulars apply to

I. GODFREY & CO.
PROVIDENCE, R. I.

The STANDARD TOOL CO.

Cleveland, Ohio,—

MANUFACTURERS OF
INCREASE TWIST DRILLS, Etc.,

TAPER SHANK DRILLS,

Straight Shank Drills,

MACHINE BIT DRILLS,

Bit Stock Drills,

SOCKETS,

TWIST DRILL GRINDING MACHINE

New York Office, 33 Chambers St.

The Only Manufacturers of Rawhide Belting in the Country.

The Chicago Rawhide Mfg. Company,
RAWHIDE BELTING, LACE LEATHER,

★ ROPE, LARIATS, FLY-NETS, ★

Picker Leather, Stock and Farm Whips, Washers, Hame Strings, Halters and other Rawhide Goods of all kinds, by Krueger's Patent. This Belting and Lace Leather is not affected by steam or dampness; has more grip than any other; never becomes hard; is stronger, more durable and the most economical Belting made. Especially adapted for the Southern trade on account of its resistance to moisture. The Rawhide Rope for Round Belting Transmission is SUPERIOR TO ALL OTHERS.

73 & 75 Ohio Street, CHICAGO, ILL.



Cincinnati Iron Market Report.

Specially reported by ROOKES, BROWN & CO., Pig Iron Commission.

CINCINNATI, January 16, 1888.

The contest among sellers has been rather sharp for current orders during the past week, and here and there concessions in prices are reported below figures hitherto made. The policy of buyers is still to postpone orders, and the market is more than ever a hesitating one. Notwithstanding all this, the leading companies have filled their books fuller than ever before at this season, with possibly one exception. Some of the largest Southern companies have closed their books entirely until April next, their product of every grade being sold. East of here, especially in Pittsburgh, the depression is very marked and many furnaces are not realizing cost. The cost limit is regarded as too high, and the bear movement is possibly shared in by makers in the hope of reducing ore freights, etc. Some Ohio furnacemen state their cost is 20 per cent. greater than prior to the advance in October, 1886. We quote for cash:

HOT-BLAST FOUNDRY.

Ohio and Southern Strong Coke No. 1.	\$30 00	50
" " "	No. 2.	18 00
" " "	No. 3.	18 00
" " "	No. 4.	18 00
" " "	No. 5.	18 00
" " "	No. 6.	18 00
" " "	No. 7.	18 00
" " "	No. 8.	18 00
" " "	No. 9.	18 00
" " "	No. 10.	18 00
" " "	No. 11.	18 00
" " "	No. 12.	18 00
" " "	No. 13.	18 00
" " "	No. 14.	18 00
" " "	No. 15.	18 00
" " "	No. 16.	18 00
" " "	No. 17.	18 00
" " "	No. 18.	18 00
" " "	No. 19.	18 00
" " "	No. 20.	18 00
" " "	No. 21.	18 00
" " "	No. 22.	18 00
" " "	No. 23.	18 00
" " "	No. 24.	18 00
" " "	No. 25.	18 00
" " "	No. 26.	18 00
" " "	No. 27.	18 00
" " "	No. 28.	18 00
" " "	No. 29.	18 00
" " "	No. 30.	18 00
" " "	No. 31.	18 00
" " "	No. 32.	18 00
" " "	No. 33.	18 00
" " "	No. 34.	18 00
" " "	No. 35.	18 00
" " "	No. 36.	18 00
" " "	No. 37.	18 00
" " "	No. 38.	18 00
" " "	No. 39.	18 00
" " "	No. 40.	18 00
" " "	No. 41.	18 00
" " "	No. 42.	18 00
" " "	No. 43.	18 00
" " "	No. 44.	18 00
" " "	No. 45.	18 00
" " "	No. 46.	18 00
" " "	No. 47.	18 00
" " "	No. 48.	18 00
" " "	No. 49.	18 00
" " "	No. 50.	18 00
" " "	No. 51.	18 00
" " "	No. 52.	18 00
" " "	No. 53.	18 00
" " "	No. 54.	18 00
" " "	No. 55.	18 00
" " "	No. 56.	18 00
" " "	No. 57.	18 00
" " "	No. 58.	18 00
" " "	No. 59.	18 00
" " "	No. 60.	18 00
" " "	No. 61.	18 00
" " "	No. 62.	18 00
" " "	No. 63.	18 00
" " "	No. 64.	18 00
" " "	No. 65.	18 00
" " "	No. 66.	18 00
" " "	No. 67.	18 00
" " "	No. 68.	18 00
" " "	No. 69.	18 00
" " "	No. 70.	18 00
" " "	No. 71.	18 00
" " "	No. 72.	18 00
" " "	No. 73.	18 00
" " "	No. 74.	18 00
" " "	No. 75.	18 00
" " "	No. 76.	18 00
" " "	No. 77.	18 00
" " "	No. 78.	18 00
" " "	No. 79.	18 00
" " "	No. 80.	18 00
" " "	No. 81.	18 00
" " "	No. 82.	18 00
" " "	No. 83.	18 00
" " "	No. 84.	18 00
" " "	No. 85.	18 00
" " "	No. 86.	18 00
" " "	No. 87.	18 00
" " "	No. 88.	18 00
" " "	No. 89.	18 00
" " "	No. 90.	18 00
" " "	No. 91.	18 00
" " "	No. 92.	18 00
" " "	No. 93.	18 00
" " "	No. 94.	18 00
" " "	No. 95.	18 00
" " "	No. 96.	18 00
" " "	No. 97.	18 00
" " "	No. 98.	18 00
" " "	No. 99.	18 00
" " "	No. 100.	18 00
" " "	No. 101.	18 00
" " "	No. 102.	18 00
" " "	No. 103.	18 00
" " "	No. 104.	18 00
" " "	No. 105.	18 00
" " "	No. 106.	18 00
" " "	No. 107.	18 00
" " "	No. 108.	18 00
" " "	No. 109.	18 00
" " "	No. 110.	18 00
" " "	No. 111.	18 00
" " "	No. 112.	18 00
" " "	No. 113.	18 00
" " "	No. 114.	18 00
" " "	No. 115.	18 00
" " "	No. 116.	18 00
" " "	No. 117.	18 00
" " "	No. 118.	18 00
" " "	No. 119.	18 00
" " "	No. 120.	18 00
" " "	No. 121.	18 00
" " "	No. 122.	18 00
" " "	No. 123.	18 00
" " "	No. 124.	18 00
" " "	No. 125.	18 00
" " "	No. 126.	18 00
" " "	No. 127.	18 00
" " "	No. 128.	18 00
" " "	No. 129.	18 00
" " "	No. 130.	18 00
" " "	No. 131.	18 00
" " "	No. 132.	18 00
" " "	No. 133.	18 00
" " "	No. 134.	18 00
" " "	No. 135.	18 00
" " "	No. 136.	18 00
" " "	No. 137.	18 00
" " "	No. 138.	18 00
" " "	No. 139.	18 00
" " "	No. 140.	18 00
" " "	No. 141.	18 00
" " "	No. 142.	18 00
" " "	No. 143.	18 00
" " "	No. 144.	18 00
" " "	No. 145.	18 00
" " "	No. 146.	18 00
" " "	No. 147.	18 00
" " "	No. 148.	18 00
" " "	No. 149.	18 00
" " "	No. 150.	18 00
" " "	No. 151.	18 00
" " "	No. 152.	18 00
" " "	No. 153.	18 00
" " "	No. 154.	18 00
" " "	No. 155.	18 00
" " "	No. 156.	18 00
" " "	No. 157.	18 00
" " "	No. 158.	18 00
" " "	No. 159.	18 00
" " "	No. 160.	18 00
" " "	No. 161.	18 00
" " "	No. 162.	18 00
" " "	No. 163.	18 00
" " "	No. 164.	18 00
" " "	No. 165.	18 00
" " "	No. 166.	18 00
" " "	No. 167.	18 00
" " "	No. 168.	18 00
" " "	No. 169.	18 00
" " "	No. 170.	18 00
" " "	No. 171.	18 00
" " "	No. 172.	18 00
" " "	No. 173.	18 00
" " "	No. 174.	18 00
" " "	No. 175.	18 00
" " "	No. 176.	18 00
" " "	No. 177.	18 00
" " "	No. 178.	18 00
" " "	No. 179.	18 00
" " "	No. 180.	18 00
" " "	No. 181.	18 00
" " "	No. 182.	18 00
" " "	No. 183.	18 00
" " "	No. 184.	18 00
" " "	No. 185.	18 00
" " "	No. 186.	18 00
" " "	No. 187.	18 00
" " "	No. 188.	18 00
" " "	No. 189.	18 00
" " "	No. 190.	18 00
" " "	No. 191.	18 00
" " "	No. 192.	18 00
" " "	No. 193.	18 00
" " "	No. 194.	18 00
" " "	No. 195.	18 00
" " "	No. 196.	18 00
" " "	No. 197.	18 00
" " "	No. 198.	18 00
" " "	No. 199.	18 00
" " "	No. 200.	18 00
" " "	No. 201.	18 00
" " "	No. 202.	18 00
" " "	No. 203.	18 00
" " "	No. 204.	18 00
" " "	No. 205.	18 00
" " "	No. 206.	18 00
" " "	No. 207.	18 00
" " "	No. 208.	18 00
" " "	No. 209.	18 00
" " "	No. 210.	18 00
" " "	No. 211.	18 00
" " "	No. 212.	18 00
" " "	No. 213.	18 00
" " "	No. 214.	18 00
" " "	No. 215.	18 00
" " "	No. 216.	18 00
" " "	No. 217.	18 00
" " "	No. 218.	18 00
" " "	No. 219.	18 00
" " "	No. 220.	18 00
" " "	No. 221.	18 00
" " "	No. 222.	18 00
" " "	No. 223.	18 00
" " "	No. 224.	18 00
" " "	No. 225.	18 00
" " "	No. 226.	18 00
" " "	No. 227.	18 00
" " "	No. 228.	18 00
" " "	No. 229.	18 00
" " "	No. 230.	18 00
" " "	No. 231.	18 00
" " "	No. 232.	18 00
" " "	No. 233.	18 00
" " "	No. 234.	18 00
" " "	No. 235.	18 00
" " "	No. 236.	18 00
" " "	No. 237.	18 00
" " "	No. 238.	18 00
" " "	No. 239.	18 00
" " "	No. 240.	18 00
" " "	No. 241.	18 00
" " "	No. 242.	18 00
" " "	No. 243.	18 00
" " "	No. 244.	18 00
" " "	No. 245.	18 00
" " "	No. 246.	18 00
" " "	No. 247.	18 00
" " "	No. 248.	18 00
" " "	No. 249.	18 00
" " "	No. 250.	18 00
" " "	No. 251.	18 00
" " "	No. 252.	18 00
" " "	No. 253.	18 00
" " "	No. 254.	18 00
" " "	No. 255.	18 00
" " "	No. 256.	18 00
" " "	No. 257.	18 00
" " "	No. 258.	18 00
" " "	No. 259.	18 00
" " "	No. 260.	18 00
" " "	No. 261.	18 00
" " "	No. 262.	18 00
" " "	No. 263.	18 00
" " "	No. 264.	18 00
" " "	No. 265.	18 00
" " "	No. 266.	18 00
" " "	No. 267.	18 00
" " "	No. 268.	18 00
" " "	No. 269.	18 00
" " "	No. 270.	18 00
" " "	No. 271.	18 00
" " "	No. 272.	18 00
" " "	No. 273.	18 00
" " "	No. 274.	18 00
" " "	No. 275.	18 00
" " "	No. 276.	18 00
" " "	No. 277.	18 00
" " "	No. 278.	18 00
" " "	No. 279.	18 00
" " "	No. 280.	18 00
" " "	No. 281.	18 00
" " "	No. 282.	18 00
" " "	No. 283.	18 00
" " "	No. 284.	18 00
" " "	No. 285.	18 00
" " "	No. 286.	18 00
" " "	No. 287.	18 00
" " "	No. 288.	18 00
" " "	No. 289.	18 00
" " "	No. 290.	18 00
" " "	No. 291.	18 00
" " "	No. 292.	18 00
" " "	No. 293.	18 00
" " "	No. 294.	18 00
" " "	No. 295.	18 00
" " "	No. 296.	18 00
" " "	No. 297.	18 00
" " "	No. 298.	18 00
" " "	No. 299.	18 00
" " "	No. 300.	18 00
" " "	No. 301.	18 00
" " "	No. 302.	18 00
" " "	No. 303.	18 00
" " "	No. 304.	18 00
" " "	No. 305.	18 00
" " "	No. 306.	18 00
" " "	No. 307.	18 00
" " "	No. 308.	18 00
" " "	No. 309.	18 00
" " "	No. 310.	18 00
" " "	No. 311.	18 00
" " "	No. 312.	18 00
" " "	No. 313.	18 00
" " "</td		

MANUFACTURERS' RECORD.

SCREW DRIVERS.	
Douglas Mfg. Co.	dis 50¢
Diston's.	dis 45¢
Cowles Mfg. Co.	dis 50¢
Stanley Rule & Level Co. Var. Hdls.	dis 60¢
Stanley Rule & Level Co.'s Black Hdls.	dis 50¢
Ratchet.	dis 35¢
Clark's Patent.	dis 25¢
Shepardson.	dis 25¢

SCREW TRIMMERS.

Boaney's.	dis 50¢
Stearns'.	dis 50¢
No. 2, \$2.50; No. 2, \$1.50.	dis 50¢
Ives'.	dis 50¢
Douglas'.	dis 50¢

SILVER PLATED WARE.

Wm. Rogers Manf. Co.	dis 50¢
Holmes, Booth & Haynes.	dis 50¢
Wallace's Steel Silver Plated.	dis 50¢
Rogers Bros 1847.	dis 50¢
C. Rogers & Bro.	dis 50¢

SCREWS.

Standard new list, Feb. 15.

Flat Head Bright. 70¢

Round Head Blued. 65¢

Round Head Brass. 65¢

Flat Head Blue (add 5¢ to net). 70¢

Brass and Silver Capped. 40¢

Japanned Flat Head. 65¢

Coach, Patent Gimlet Points. 65¢

Bed. 70¢

Machine, Flat Head, Iron. 35¢

Machine, Round Head, Iron. 50¢

Bench, Iron. 55¢

Bench, Wood, Bench. 50¢

Bench, Wood, Hickory. 50¢

Hand Wed. 65¢

Hand Rail, Sargent's. 65¢

Hand Rail, Huntington, Buckley & Co.'s. 40¢

Hand Rail, Am. Screw Co., list Jan. 1, '83. 70¢

Jack (Wilson's). 25¢

SCREEN FRAMES AND FIXTURES.

Standard Window Screens No. 1, \$1.00; No. 2, \$1.50

" Door " No. 5, \$1.50; dis 50¢

" Window Corner Irons, No. 3, dis. 50¢

" Door " No. 6, " " 50¢

" Door Latches, \$3.00; dis 50¢

Porter's Patent Window and Door Screen Frames:

PER DOZ. SETS.

In 1m. Blk White. Walnut.

No. 20. \$2.75 \$3.25

No. 21. 2.25 4.00

No. 22. 3.50 6.75

No. 23. 5.00 7.50

No. 24. 9.00 11.00

Porter's Corners—

No. o. Corners and Sticks complete for a three-foot window, \$2.00 sets.

No. 1. Set for Window, \$2.00 sets Bronzed, \$3.00; Nickel, \$3.50

No. 1½. " " \$2.00 sets, Bronzed, \$3.50; Nickel, \$3.50

No. 4. " " \$2.00 sets, Bronzed, \$4.00; Nickel, \$4.00

No. 3½. " " or door, \$2.00 sets, Bronzed, \$3.50; Nickel, \$3.50

No. 4½. " " or Door, \$2.00 sets, Bronzed, \$4.00; Nickel, \$4.00

No. 5½. " " Door, \$2.00 sets, Bronzed, \$6.75; Nickel, \$6.75

No. 3. " " \$2.00 sets, Bronzed, \$12.00; Nickel, \$14.00

Boughton's Adjus. Window and Door Screens. dis 25¢

Boughton's Adjus. Window and Door Frames. dis 25¢

Window screen frames (Stuart's). 25¢

SCHEARS AND SCISSORS.

American (Cast) Iron. dis 50¢

Pruning. see Pruning Hooks and Shears

Barnard's Lamp Trimmers. dis 50¢

Tinners'. dis 50¢

Massachusetts. dis 50¢

Seymour's.

Jersey Shears.

J. Wiss & Son, Nickle. socks 5¢; Japanned, 60¢

SHRAVES.

Sliding Door, M. W. & Co., List. dis 45¢

Sliding Door, R. & E. list. dis 50¢

Sliding Door, Patent Roller. dis 50¢

Sliding Door, Pt. Roller, Hatfield's. dis 50¢

Sliding Door, Russell's Anti-Friction. dis 50¢

Also see Hangers.

SHOVELS AND SPADES.

Ames, New List, November 1, '83. dis 50¢

Gilliffs. dis 50¢

Remington's (Lowman's Patent). dis 50¢

Rowland's. dis 50¢

Lippiscott, New list. dis 50¢

Husky, Binc & Co. dis 50¢

SILVER PLATED HOLLOW WARE.

Wm. Rogers Manf. Co. dis 50¢

Meriden Britannia Co. dis 40¢

SOLDERING IRONS AND COPPERS.

Covert's Soldering Irons. dis 35¢

Covert's Adjustable Copper. dis 35¢

SOUPERS.

Britannia. dis 60, 10¢ & 15¢

Tinned Iron, Table and Tea. dis 65¢

Tinned Iron Basting. dis 50¢

German Silver. dis 40¢

STONE.

Hindston No. 1, 4c.; Axe, 5c. net

Sand Stone. No. 1, 5¢; No. 2, 10¢; No. 3, 15¢

Washita Stone. No. 1, 5¢; No. 2, 10¢; No. 3, 15¢

Arkansas. \$1.50 per lb.

SQUARES.

Steel. dis 50¢

Iron. dis 50¢

Nickel Plated. add 50¢

Ttry Square and T Bevels. dis 50¢

Newton's Try Square and T Bevels. dis 40¢

TACKS, BRADS, &c.

American Iron Carpet Tacks, all kinds. 75¢ & 10¢

Steel Carpet Tacks, all kinds. 75¢ & 10¢

Swedes Iron Carpet Tacks, all kinds. 75¢ & 10¢

Swedes Iron Tacks. 65¢ & 10¢

Tinned Iron Carpet Tacks. 65¢ & 10¢

Tinned Swedes Iron Carpet Tacks. 65¢ & 10¢

American Iron Cut Tacks. 70¢ & 10¢

Gimp and Lace Tacks. 65¢ & 10¢

Copper Tacks. 35¢ & 10¢

Copper Finsishing and Trunk Nails. 35¢ & 10¢

Cigar Box Nails. 45¢ & 10¢

Finishing Nails. 50¢ & 10¢

Trunk and Clout Nails. 50¢ & 10¢

Tinned Trunk and Clout Nails. 50¢ & 10¢

Basket Nails. 50¢ & 10¢

Chair Nails. 50¢ & 10¢

Zinc Glaciers' Points. 40¢ & 10¢

Common and Patent Tacks. 40¢ & 10¢

Hungarian Nails and Miners' Tacks. 50¢ & 10¢

Tinned Coppered Trunk Nails. 50¢ & 10¢

SCREW DRIVERS.

Douglas Mfg. Co. dis 50¢

Diston's. dis 45¢

Cowles Mfg. Co. dis 50¢

Stanley Rule & Level Co. Var. Hdls. 60¢

Stanley Rule & Level Co.'s Black Hdls. 50¢

Ratchet. dis 35¢

Ratchet. dis 25¢

Clark's Patent. dis 25¢

Shepardson. dis 25¢

SCREW TRIMMERS.

Boaney's. dis 50¢

Stearns' dis 50¢

No. 2, \$2.50; No. 2, \$1.50.

Ives' dis 50¢

Douglas' dis 50¢

SILVER PLATED WARE.

Wm. Rogers Manf. Co. dis 50¢

Holmes, Booth & Haynes. dis 50¢

Wallace's Steel Silver Plated. dis 50¢

Rogers Bros 1847. dis 50¢

C. Rogers & Bro. dis 50¢

SCREWS.

Standard new list, Feb. 15.

SCREW TRIMMERS.

Boaney's. dis 50¢

Stearns' dis 50¢

No. 2, \$2.50; No. 2, \$1.50.

Ives' dis 50¢

Douglas' dis 50¢

SILVER PLATED WARE.

Wm. Rogers Manf. Co. dis 50¢

Holmes, Booth & Haynes. dis 50¢

Wallace's Steel Silver Plated. dis 50¢

Rogers Bros 1847. dis 50¢

C. Rogers & Bro. dis 50¢

SCREWS.

Standard new list, Feb. 15.

SCREW TRIMMERS.

Boaney's. dis 50¢

Stearns' dis 50¢

No. 2, \$2.50; No. 2, \$1.50.

Ives' dis 50¢

Douglas' dis 50¢

SILVER PLATED WARE.

Wm. Rogers Manf. Co. dis 50¢

Holmes, Booth & Haynes. dis 50¢

Wallace's Steel Silver Plated. dis 50¢

Rogers Bros 1847. dis 50¢

C. Rogers & Bro. dis 50¢

SCREWS.

Standard new list, Feb. 15.

SCREW TRIMMERS.

Boaney's. dis 50¢

Stearns' dis 50¢

No. 2, \$2.50; No. 2, \$1.50.

Ives' dis 50¢

Douglas' dis 50¢

SILVER PLATED WARE.

Wm. Rogers Manf. Co. dis 50¢

Holmes, Booth & Haynes. dis 50¢

Wallace's Steel Silver Plated. dis 50¢

Rogers Bros 1847. dis 50¢

MANUFACTURERS OF
GLOBE
"STANDING SEAM"
IRON ROOFING.

Excelsior
V-Crimped
IRON ROOFING.
READY-ROLL
CAPPED ROOFING.



Corrugated Iron,
All Desired Gauges and
Sizes.
Painted,
Calamined,
Galvanized.

Send for our descriptive and illustrated catalogue.

PRICES and ESTIMATES
promptly furnished.

CRIMPED & CORRUGATED
IRON ROOFING.
SIDING. METAL
CEILING. SHINGLES.
W.G. HYNDMAN & CO.
CINCINNATI, O.
SEND FOR CIRCULAR & PRICES

CANTON IRON ROOFING CO., CANTON, OHIO,
MANUFACTURERS OF THE H. W. SMITH PATENT
STEEL ROOFING
Made of genuine sheet steel and calaminated steel.
Send for Catalogue, Price List and Samples.

GARRY IRON ROOFING COMPANY,
Largest manufacturers of Iron Roofing in the world.
Manufacturers of all kinds of
IRON ROOFING,
Shaped and Corrugated Siding, Iron Tile or Shingle, Fire-Proof Doors, Shutters, Iron Frames, Dr. rock, buildings, &c.
Send for Circular and Price List No. 99.

HOLTON IRON ROOFING CO.
ROOFING, CEILING & C. NEW LISBON, O.
SIDING.
AGENTS WANTED EVERYWHERE

THE SAGENDORPH
IRON ROOFING & CORRUGATING CO.
CINCINNATI, OHIO.

METAL SKYLIGHTS

AND VENTILATORS for Mills, Stores and Dwellings.
Galvanized Iron and Copper Cornices and Gutters, Metal Shingles, Sheet Metal Work for buildings. Send for illustrated circular.
E. VAN NOORDEN & CO.
383 Harrison Avenue, - - BOSTON.

SYKES IRON ROOFING CO., NILES, O.
SYKES' IMPROVED Best Roof in the World. Suitable for all classes of Buildings. Easy Put On.
Send for Circular and Price List, and mention this Paper.

"Sparger's White Heat Steel Compound." FOR WELDING OR WORKING STEEL.

It is superior to borax or anything else, and much cheaper. Its chief ingredient is a natural deposit found near Bristol, Tenn. It will restore steel when burned, or, if used properly, prevent any injury from over-heating. It is successfully used by some of the largest steel manufacturers in the country in reducing heavy ingots, &c. Price, 5 cents per pound by the barrel of 500 to 800 pounds, or 6 cents per pound by the keg of 100 pounds.

THE SPARGER STEEL COMPOUND CO., Chartered.

Capital Stock \$100,000.

W. A. SPARGER, Pres't.

BRISTOL, TENN.

E. W. KING, Treas'r.

H. H. HAYNES, Sec'y.

ESTABLISHED 1832 ON PRESENT PREMISES.

The Best

-IS-

ALWAYS

-THE-

Cheapest.



Therefore
BUY OUR
COLOPHINE
—OR—
Perfect Oils

The above are our specialties in MACHINERY OILS, and are the best oils for the price manufactured. We can give you anything in the OIL LINE, any grade, at the very lowest prices. Correspondence solicited.

WM. G. ROBINSON & SON,
MANUFACTURERS AND DEALERS IN OILS,
217 South Street, Baltimore, Md.

R. SWORMSTEDT & CO.
Mill Builders
Also Eastern and Southern Agents for
The COLUMBUS
ROLLER CHAIN BELTING.
Mill Furnishings

All MACHINERY sold at Manufacturers' Price, and fully guaranteed as represented.

Office and Warehouse, 11 S. Frederick Street,
BALTIMORE, MD.

Baltimore Mill Furnishing Works,
Manufacturers of
MILL STONES, ROLLER MILLS, PORTABLE MILLS, PULLEYS,
SHAFTING, and MILL GEARING.
Importers of
BOLTING CLOTHS, and GENERAL MILL FURNISHERS.
B. F. STARR & CO.
North and Center Sts., Baltimore.

EMPIRE CITY PULVERIZING MILLS,
For Coffee, Ginger and other roots, Spices, Chemicals, &c.
TO ANY DEGREE OF FINENESS.
Also Grains of all kind, Bar Corn, Beans, Peas, etc.
J. B. WARING & SONS, 106 & 108 Liberty Street, N. Y.
Complete Pulverizing Plants Furnished.

DAVIDS' PATENT DISINTEGRATING MILL
For Bones, Phosphates, Tankage, Ores, Clay, Fish Scrap, Salt Cake, &c.
Fertilizer Machinery, Mixers' Rolls, Breakers, &c., &c. Marine
Railways, Clay Temperers. Send for Catalogue.
JAMES MURRAY & SONS, 102 to 108 York Street, Baltimore, Md.

PHOSPHOR-BRONZE
INGOTS, CASTINGS & MANUFACTURES.
THE PHOSPHOR BRONZE SMELTING CO. LIMITED
512 ARCH ST. PHILADELPHIA PA. U.S.A.
ORIGINAL MANUFACTURERS OF PHOSPHOR-BRONZE IN THE UNITED STATES AND OWNERS OF THE U.S. PATENTS.

FOR THE LATEST IMPROVED
GAS WORKS APPARATUS AND HOLDERS,

ADDRESS
KERR-MURRAY MANUFACTURING CO., FORT WAYNE, IND.
PLANS, ESTIMATES AND DRAWINGS FURNISHED.

MANUFACTURERS' RECORD.

BLACKSMITHS' TOOLS.**The Jeffrey Mfg. Co.**

121 West State St., Columbus, O.
MANUFACTURERS OF
ELEVATORS, CONVEYERS,
DRIVING BELTS, for Handling

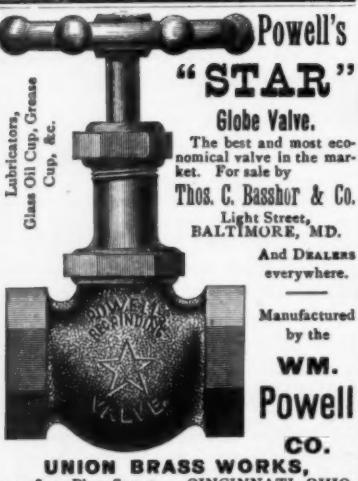


R. SWORMSTEDT & CO., Agents, Baltimore.



Adapted for Warehouses, Stores, Factories, Hotels, Public Institutions, and every place where merchandise, &c., is transferred from one story to another.

JAMES BATES, Pattee,
Nos. 1 3 & 5 President Street, BALTIMORE.

**PILE DRIVERS,
STEAM DREDGERS**

Vulcan Iron Works,
CHICAGO.

Write for circular of our improved Nasmyth Pile Hammer.

Syracuse Twist Drill Co.

SYRACUSE, N. Y.

Cannon Chucking Reamers.

These Reamers will remove more stock than any other. They only require a hole large enough to carry away the chips, as they will cut to the center, and make a perfect hole.

They keep their size better than any other. As they cut only upon the end, there is no tendency to wear below size.

They will not turn aside for hard or soft spots, nor for holes.

Send for Prices and Catalogue.

**\$250 WILL BUY**

THE BEST
SAW MILL
Not offered for the money.
SEND FOR CIRCULAR.
RICHMOND MACHINE WORKS,
RICHMOND, INDIANA.

\$250 SINGLE. \$350 DOUBLE.

With Saw and
Wood for
Top Saw Blanks can be
added to Single Mill
when desired. Capacity,
3,000 to 5,000 per
day with 3 men. 10 to
15 horse portable engine will
drive it. Agents wanted.
Send for description
and terms.

ROCKWOOD, NEWCOMB & CO.

180 to 190 S. Pennsylvania St., Indianapolis, Ind.

McShane & Bell Foundry

Fine Iron and Brass Castings Made to Order.

Manufacture those celebrated Bells for Tower Clocks, Court-Houses, Cotton Mills, Factories, &c. Prices and catalogues sent free. Address H. McSHANE & CO.
Baltimore, Md.
Mention this Paper.

A. B. FARQUHAR, York, Pa.

Improved Standard Iron-Frame Grist Mill for Corn, Wheat and other Grains. It will pay every one who owns an engine to have one of these Mills. 16 inch will grind from 5 to 15 bushels per hour, depending on the quality of grain. 20 inch from 5 to 30 bushels per hour. Steam Engines, Grist Mills, Saw Mills, Shingle Machines, and Standard Implements a specialty. Send for Catalogue.

A. B. FARQUHAR, York, Pa.

THE BAY LINE

FOR
FORTRESS MONROE, NORFOLK and the SOUTH.

The Bay Line comprises the New and Elegant Steamers

"VIRGINIA," "CAROLINA," and "FLORIDA."

All the Comforts and Luxuries of First-Class Hotel are afforded the Traveler. Spacious and Elegant Saloons and Staterooms, furnished with an especial view to comfort. Unsurpassed Cuisine, which is made a specialty with this Line. Elegant service and courteous attention. Steamers leave Baltimore daily except Sundays at 9 P. M.

At Old Point Comfort is located the SPLENDID HYGEIA HOTEL, a Delightful Resort at all seasons of the Year. For Tickets and Information, apply at Company's office,

157 W. BALTIMORE ST., BALTIMORE,

Or on Board of Steamers.

D. J. HILL, Superintendent.

H. BROWN, General Ticket Agent.

E. HARRINGTON, SON & CO.

Established 1867.
Works and Office,
N. 15 St. & Penna. Ave., Phila., Pa.

Manufacturers of a full line of

**Iron Working Machinery,**

INCLUDING

Extension and Gap Lathes. Planers with Quick Return, Drills, &c., Hand Power Elevators with Patent Brake, Double Chain Screw Hoists, Overhead Tramway with Switch, Turntable and Geared Truck.

Gear Cutting a Specialty. Send for Estimates.

REPRESENTED BY
J. Q. MAYNARD, 12 Cortlandt St., New York.
C. E. KIMBALL, 93 Oliver Street, Boston, Mass.
W. BUCHNER, 100 Main St., Cincinnati, Ohio.

No. 40.

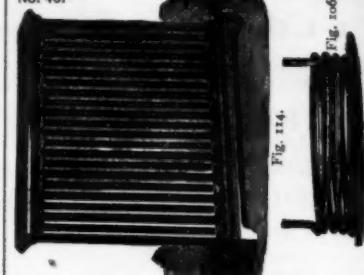


Fig. 114.

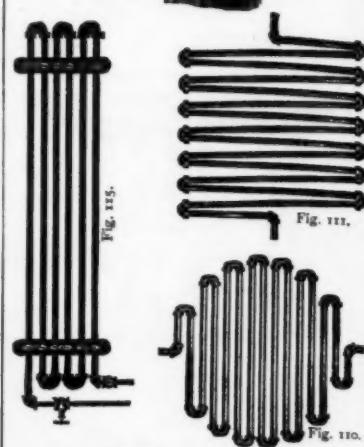


Fig. 111.



Fig. 110.



Fig. 112.



Fig. 113.



Fig. 114.



Fig. 115.



Fig. 116.



Fig. 117.



Fig. 118.



Fig. 119.

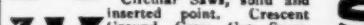


Fig. 119.



Fig. 119.

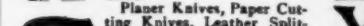


Fig. 119.



Fig. 119.

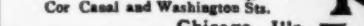


Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.

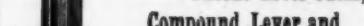


Fig. 119.

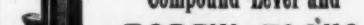


Fig. 119.

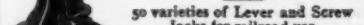


Fig. 119.



Fig. 119.



Fig. 119.



Fig. 119.

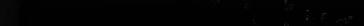


Fig. 119.

Fig. 119.

THE St. James Hotel

Cor. Charles and Centre Streets. BALTIMORE, MD. Near the Washington Monument.

ON THE EUROPEAN PLAN.

Strictly First-Class. Rooms Single and En Suite.

FINEST CAFÉ IN BALTIMORE.

The St. James Hotel has the pleasantest situation, amid beautiful surroundings, and is patronized by the better class of travelers. The hotel is now under a new management, and has been refitted and improved in every way. Secure rooms in advance by addressing

JOHN S. CROWTHER, Manager.

THE STILLMAN



CLEVELAND, OHIO.

Unsurpassed in its Elegance, Fine Cuisine and Table Service.

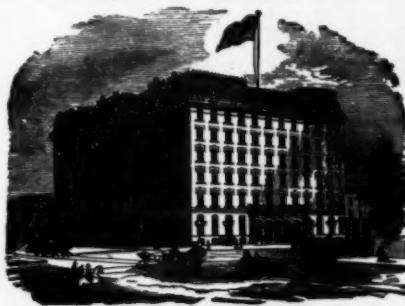
Only Fire-Proof Hotel in Cleveland.

Every room heated by Steam and lighted by Electric Light.

RATES \$3.50 TO \$5.00 PER DAY.

Elegant suites can be secured by addressing

J. WARREN COLEMAN, Jr., Manager.



Colonnade Hotel,

Chestnut St., Cor. 16th,

One block from new Penna. Railroad Depot,

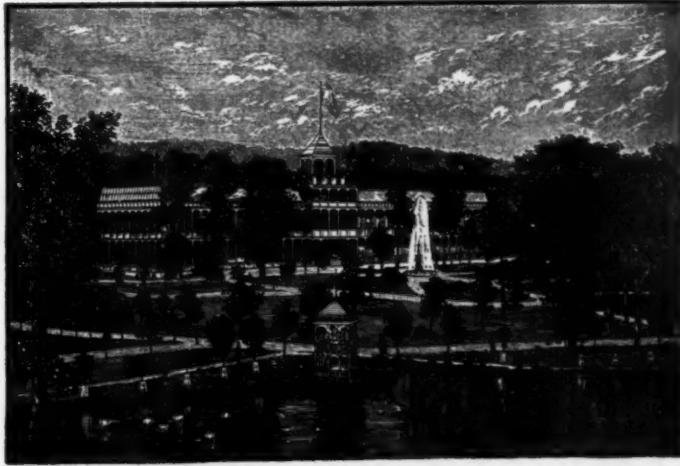
PHILADELPHIA.

H. J. & G. R. CRUMP.

A FAVORITE RESORT
FOR ALL
SOUTHERN TRAVEL.

Lakeview Hotel,

LAKEVIEW PARK, near BIRMINGHAM, ALA.



ELY SPENCER, Manager.

ALTITUDE OF HOTEL, 150 FEET ABOVE CITY.

Hotel and Furniture Entirely New. House Supplied Throughout with Pure Spring Water by an Independent System of Water Works. Electric Lights, Electric Bells, and all Modern Conveniences.

ACCOMMODATIONS FIRST-CLASS IN EVERY PARTICULAR.

Steam Motor Trains on Highland Avenue Railroad leave 19th Street and 1st Avenue, within Half Block of Union Passenger Depot, for Lakeview Park, every Fifteen Minutes. Concerts Every Afternoon and Evening by the Hotel Band.

THE MANUFACTURERS' RECORD

IS THE FOREMOST EXPONENT OF THE INDUSTRIAL
INTERESTS OF THE SOUTH.



THE PREMIER FLOUR OF AMERICA. Patapsco Flouring Mills.

ESTABLISHED 1774.

OUR PATENT ROLLER FLOURS

Are manufactured from the CHOICEST WHEAT OBTAINABLE. Their superiority for UNIFORMITY, STRENGTH AND UNAPPROACHABLE FLAVOR has long been acknowledged. Our PATAPSOCO SUPERLATIVE PATENT STANDS UNRIVALLED. Of a RICH, CREAMY COLOR, it makes a Bread that will SUIT THE MOST FASTIDIOUS.

SEE YOUR GROCER FOR
PATAPSOCO SUPERLATIVE PATENT,
CHESAPEAKE EXTRA,

PATAPSOCO FAMILY PATENT,
ORANGE GROVE EXTRA.

C. A. GAMBRILL MNFG CO.
Office, 914 Commerce St., Baltimore, Md.



Issues Policies of Insurance after Careful Inspection of the Boilers, covering Loss or damage to property, and Loss of Life and Personal Injury

ARISING FROM STEAM BOILER EXPLOSIONS.

Full information concerning the plan of the Company's operations can be obtained at the COMPANY'S OFFICE, Hartford, Conn., or at any agency.

M. ALLEN, Pres. W. B. FRANKLIN, Vice-Pres. J. B. PIERCE, Secy.

BOARD OF DIRECTORS:

J. M. ALLEN, President. GEN. WM. B. FRANKLIN, Vice-President, Colt's Patent Fire Arms Manufacturing Co., New Haven, Conn.; President Chesapeake & Atlantic Silk Mfg. Co. NELSON HOLLOWAY, of State Bank, Hartford. DANIEL COOPER, of Adams Express Co. R. W. H. JARVIS, Pres't Colt's Fire Arms Mfg. Co. THOMAS O. ENDERS, Secretary, Anna Life Insurance Co. LAVERTON BRAINARD, of Case, Lockwood & Brainard. HOM. H. C. HOLBORN, Attorney-at-Law, Hartford. LAWFORD & MCKIM, Agents for Maryland, 22 Second St., Baltimore, Md.

W. B. FRANKLIN, Director. CHARLES T. PARRY, of Baldwin Locomotive Works, Phila. EDMUND A. STEEDMAN, Treasurer, Fidelity Co., Hartford, Conn. CLIFF SPOONER, H. E. Manager, Adams Express Co., Bridgeport, Conn.

W. B. FRANKLIN, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

FRANCIS K. HARRIS, Director. MARY PUTNAM JACOBI, H. D., 135 W. 3rd Street, New York.

CHARLOTTE MULLIGAN, M. F. Hoagland, Secretary.

F. W. DEVOE & CO.

(ESTABLISHED 1852.)

OFFICES: Fulton Street, Corner William,
NEW YORK.

PURE MIXED PAINTS.

you think of doing any painting this spring, we wish to call your attention to the fact that we guarantee our ready-mixed paints to be made only of pure linseed oil, and the most permanent pigments. They are not "Chemical," "Rubber," "Patent," or "Fire-Proof."

We use no secret or patent method in manufacturing them, by which benzine and water are made to serve the purpose of pure linseed oil.

Samples of Fifty Desirable Shades for consumers on request.

Elastic ROOF Paint,

A special paint for roofs, which remains elastic, and will not chip or peel off.

Fine Varnishes, Artists' Materials,

PAINTERS' SUPPLIES OF ALL KINDS,

♦Mathematical Instruments and Engineers' Goods.♦

Catalogues of our different departments to responsible parties.

Cor. Fulton and William Sts. | COFFIN, DEVOE & CO.
NEW YORK. 176 Randolph Street. CHICAGO.

Queen City Printing Ink Co.

CINCINNATI, OHIO.

THE INK WITH WHICH THIS PAPER IS PRINTED
IS MADE BY THE QUEEN CITY PRINTING INK CO.
CINCINNATI, O.

MANUFACTURERS OF ALL DESCRIPTIONS OF

INKS!

♦Varnishes and Sizes♦

FOR PRINTERS' USE.

New York Office, . . . 194 William Street.
Philadelphia Office, . . . 434 Walnut Street.



Wood Split Pulleys.



MILBURN

Gin & Machine Co.

MEMPHIS, TENN., U. S. A.

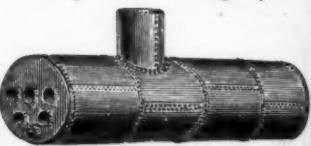
MANUFACTURERS O.

STEAM ENGINES, BOILERS,

(Made by the Tweedle System of Hydraulic Riveting.)

Cotton Gins, Gin Feeders and Condensers,
And the Celebrated "MILBURN" Wood Split Pulley, with Bushing System.

The best and lightest Pulley made. Every one guaranteed. Send for catalogue, testimonials and price-lists. We have the largest works of the kind in the world. Will send one of our Wood Split Pulleys



to any responsible party,
for thirty days' trial, free
of charge, if it fails to
meet our warranty.

Milburn Gin
& Machine Co.

Send for Illustrated Circular and Price-List.



THE IMPROVED FLORIDA STEAM HEATER

The best and most complete House Heater in the world. Self-feeding, automatic, portable and saves all expense of brick-work. Most economical. Carries steam from 10 to 12 hours without attention. Compact. 14 sizes, from 4 to 6 feet high. Anti-clinker grate, easily shaken, no dust. Sales larger than the combined sales of all reputable Steam Heaters.

3500 in ACTUAL USE,
all giving the best satisfaction. Estimates furnished on application. Send for Illustrated Catalogue. Address

PIERCE, BUTLER & PIERCE MFG. CO.,
SOLE MANUFACTURERS, SYRACUSE, N. Y.
GEO. H. CORR, 97 William St., New York, N. Y.
CRANE BROS. MFG. CO., Chicago, Ill.
JAS. B. ROBERTSON & CO., Baltimore, Md.
J. O. NELSON MFG. CO., St. Louis, Mo.
H. TABER & SON, Chicago, Ill.
JAMES P. WOOD & CO., Philadelphia, Pa.



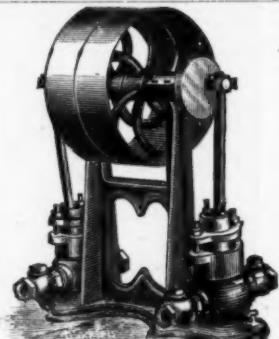
Stewart Heater Co.

BUFFALO, N. Y.

THE BEST AND CHEAPEST
Feed Water Heaters
and Purifiers.

Single and Double Plunger
BOILER FEED PUMPS.
The Red Jacket Flue Blower.

Write for Catalogue.



LOUISIANA SUGAR REFINING CO., NEW ORLEANS, LA., May 5, 1887.

MASON REGULATOR CO., Boston. Gentlemen: The MASON GOVERNORS which you furnished for our vacuum pumps are working to my entire satisfaction, maintaining a uniform speed under the varying conditions of steam pressure, etc. The MASON REDUCING VALVES, furnished for our granulators, are also giving excellent results.

Yours truly,

GEO. O. EASTWICH, Supt.

Shafting, Hangers.

Cantines of every
Description made.
Stationary, Distillery
Mill and Boiler Work.

JNO. N. MARQUETTE, 118 W. Falls Ave., BALTIMORE, MD.

DAVID BOYLE,

521 W. MONROE STREET, - - CHICAGO, ILL.

PATENTEE AND BUILDER OF THE

BOYLE ICE MACHINE
AND REFRIGERATING APPARATUS.

The Most Simple, Reliable, Durable and Economical in Existence.

WHAT PEOPLE SAY.

"I consider it the greatest improvement that has ever been made in breweries." — FRED. PABST, President Ph. Best Brewing Co. "We are thoroughly satisfied with your machine, and we believe it is superior to any other in the market to-day." — HENRY G. KUHRT, President Atlanta City Brewing Co., Atlanta, Ga.
Estimates for Ice or Refrigerating Machines furnished on application.

Refer to over 125 Machines in successful operation.

THE BABCOCK & WILCOX CO.

VALUABLE BOOK ON STEAM

Branch Offices

BOSTON, MASS.
65 OLIVER ST.

PHILADELPHIA, PA.
32 N. 5TH ST.

CHICAGO, ILL. 64 S. CANAL ST.

NEW ORLEANS, LA. 57 CARONDELET ST.

SAN FRANCISCO, CAL.
561 MISSION ST.

LONDON, ENG. 114 NEWGATE ST.

MANCHESTER, ENG.
3 VICTORIA BUILDING

PARIS, FRANCE. 40 RUE DE MALTE

HAVANA, CUBA. W. 1. SAN IGNACIO.

SYDNEY, N.S.W. 3 SPRING ST.

Glasgow, Scotland

FREE ON APPLICATION

WATER TUBE STEAM BOILERS.

— THE —

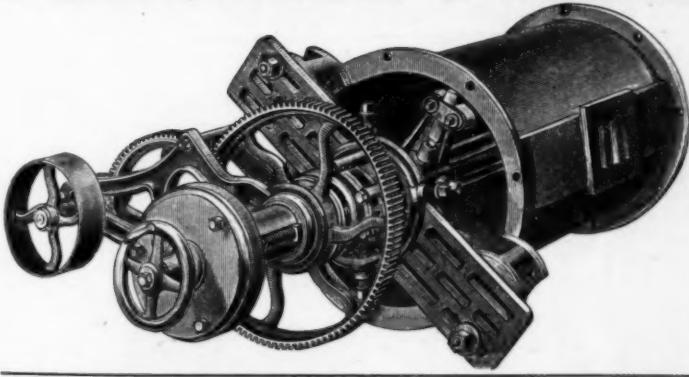
BABCOCK & WILCOX**BOILERS**

Are Used in the

** SOUTH **

BY

H.P.	
Pennsylvania Steel Co., Baltimore, Md.	3,450
Gosport Navy Yard, Norfolk, Va.	183
Newberry Cotton Mills, Newberry, S.C.	480
Ponce de Leon Hotel, St. Augustine, Fla.	416
Gadides Furnace Co., Gadides, Ala.	644
Tennessee Coal, Iron & Railroad Co., South Pittsburg, Tenn.	644
Senate Wing, U. S. Capitol, Washington, D. C.	318
Wise Brothers, Baltimore, Md.	108
Alabama & Tennessee Coal and Iron Co., Sheffield, Ala.	1,872
Harris Distilling Co., Baltimore, Md.	480
F. & H. Fries, Salem, N. C.	350
Jno. Crosby & Sons, Southwood Plantation, La.	1,510
Louisiana Sugar Refining Co., New Orleans, La.	960

PORTABLE CYLINDER BORING MACHINE

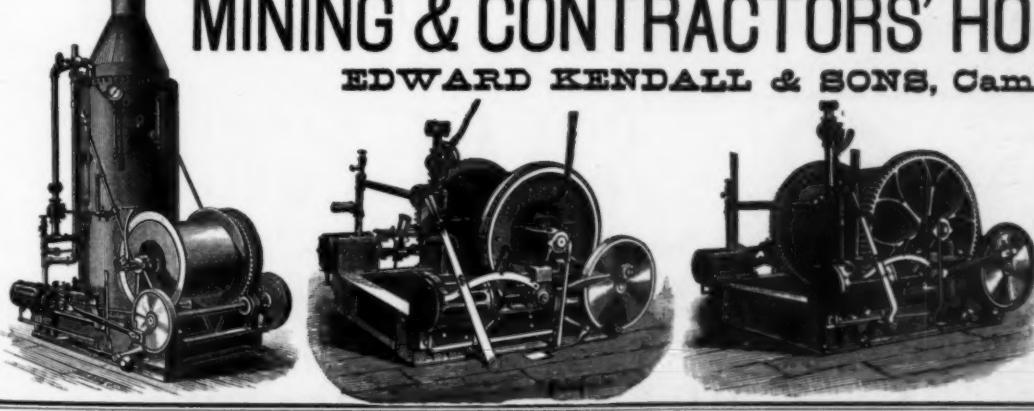
This machine is designed for re-boring in present positions all makes and sizes of steam engine cylinders, pumps, steam hammers, blowing engines, air compressors, mining and hoisting engines, corliss valves, hydraulic and steam hoists, heavy housings, large wheels, etc. It will bore with one or both cylinder heads off, either vertical, horizontal, or inclined on the engine bed, or laying on the ground. It is so constructed that the piece being bored serves as the bed or support of the bar. It is only necessary to take off the cylinder head and remove piston, when the cylinder can rapidly and accurately be bored out. This saves breaking the steam joints, bolts, etc., and often cylinder can be re-bored in less time than it would take to remove cylinder from its bed.

PEDRICK & AYER,

1025 HAMILTON STREET, - - - PHILADELPHIA, PA.

MINING & CONTRACTORS' HOISTING ENGINES

EDWARD KENDALL & SONS, Cambridgeport, Mass.



- Double or Single Cylinders.
- Double or Single Drums, Straight or Cone Shaped, Smooth or Grooved, for Rope.
- Fast Drums with Reverse Link.
- Friction Drums without Link.
- Friction Drums with Link.
- Double or Single Gear.

BOILERS, TANKS, HEATERS.
General Plate and Sheet Iron Work.
Send for Catalogue C.

THE MANUFACTURERS' RECORD

is the most thorough, complete and authentic source of information on Southern industrial affairs in existence. The subscription price is only \$3.00 a year. Some of our subscribers think every issue is worth that much. Try it for a year. Send in your subscription **to-day**. Don't wait until to-morrow; you may forget it.



The Hammond Type Writer

Is the Highest Achievement yet reached in Writing Machines.



Although not so well known as its predecessors, it has at once sprung into popular favor, and the manufacturers are taxed to supply the demand. It has been on the market long enough to thoroughly test its wearing qualities, and the judgment of all who have used them is that it is the "ne plus ultra" of Type Writers.

Two different styles of type accompany each machine, and other styles can be instantly inserted. The manufacturers of the Hammond solicit business solely upon the ground of superior merit in their particular instrument. An examination, trial and test of the Hammond is solicited by all intending purchasers of Type Writers.

NOTED FOR speed, absolutely perfect alignment, for uniform impression, changeable type, is light and portable, writes on any width or length of paper, writes on postals, has from 800 to 1,500 less pieces than any other machine, and its work is always in sight. Send for circulars and specimens of its work to

HAMMOND TYPE WRITER CO.

75 and 77 Nassau Street.
Baltimore Office, No. 15 N. Charles St.

NEW YORK.

Atlanta Office, No. 21 Alabama St.

SAWYER-MAN ELECTRIC CO.

Licensed by and Succeeding to the Commercial Business of the
CONSOLIDATED ELECTRIC LIGHT COMPANY.

OWNERS

OF THE

SAWYER-MAN
PATENTS.



GENERAL OFFICES:
Mutual Life Building,
No. 22 Nassau St., N. Y. City.

BALTIMORE OFFICE:
No. 217 E. Fayette St.

PHILADELPHIA OFFICE:
No. 205 Walnut Place.

BOSTON OFFICE:
No. 33 Federal Street.

The DYNAMO of this Company is AUTOMATIC in its regulation, and will maintain a UNIFORM LIGHT, with ALL or ANY PORTION of the lights in Circuit. Our LAMP will not BLACKEN and will MAINTAIN its CANDLE POWER during its Guaranteed life. Plans and Estimates Furnished for all kinds of Incandescent Lighting. ESTIMATES FURNISHED FOR THE THOMSON-HOUSTON SYSTEM OF ARC LIGHTING.

The ORIGINAL UNVULCANIZED PACKING.



* Called the Standard, *

AS it is THE PACKING BY WHICH ALL OTHERS ARE COMPARED

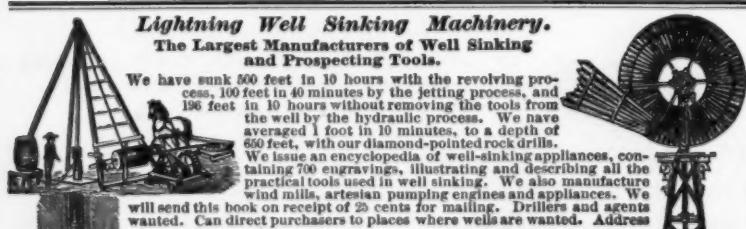
Accept no packing as JENKINS' PACKING unless stamped with our "Trade Mark."

JENKINS BROS.

69 John St., N. Y. 105 Milk St., Boston. 13 S. Fourth St., Phila.

Lightning Well Sinking Machinery.

The Largest Manufacturers of Well Sinking and Prospecting Tools.



We have sunk 500 feet in 10 hours with the revolving process, 100 feet in 40 minutes by the jetting process, and 196 feet in 10 hours without removing the tools from the well by the hydraulic process. We have averaged 1 foot in 10 minutes, to a depth of 650 feet, with our diamond-pointed rock drills. We issue an encyclopedia of well-sinking appliances, containing illustrations and descriptions of all the practical tools used in well sinking. We also manufacture wind mills, artesian pumping engines and appliances. We will send this book on receipt of 25 cents for mailing. Drillers and agents wanted. Can direct purchasers to places where wells are wanted. Address

The American Well Works,
AURORA, ILL., U. S. A.

Fine Cut Work
A Specialty.

Cor. Exchange Place
and Commerce St.

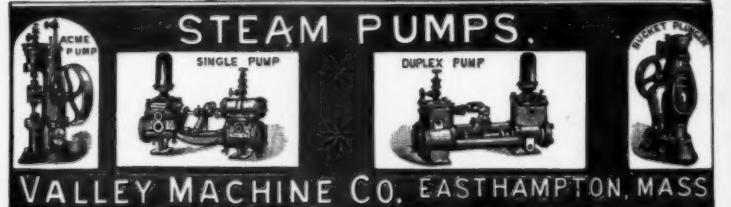
Record Printing House,

DEAN BROS. STEAM PUMP WORKS.

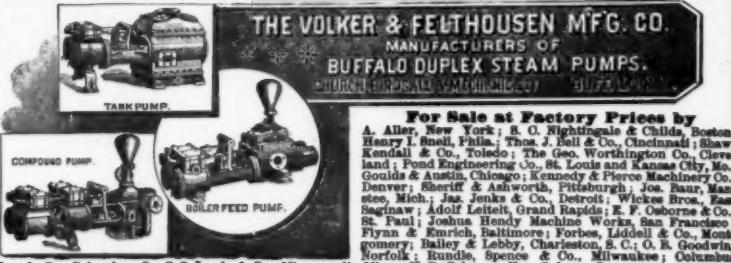


INDIANAPOLIS, IND.

SEND FOR CATALOGUE
AND PRICES.



VALLEY MACHINE CO. EASTHAMPTON, MASS



Supply Co., Columbus, O.; C. S. Leeds & Co., Minneapolis, Minn.; H. D. Coleman, New Orleans, La.

For Sale at Factory Prices by
A. Allen, New York; S. O. Nightingale, Chicago; Boston;
Henry I. Small, Philadelphia; Thomas J. Bell & Co., Cincinnati; Shaw,
Kendall & Co., Toledo; The Geo. Worthington Co., Cleveland;
Fond Engineering Co., St. Louis and Kansas City, Mo.;
Goulds & Austin, Chicago; Kennedy & Pierce Machinery Co.,
Denver; Gifford & Co., Milwaukee; Thompson, Morris, New Haven, San
Jose, Mich.; John Jenkins & Co., Detroit; W. W. White, Birmingham;
Adolf Leitelt, Grand Rapids; R. F. Osborne & Co., St. Paul; Joshua Hendy Machine Works, San Francisco;
Flynn & Emrich, Baltimore; Forbes, Liddle & Co., Montreal;
Norfolk, Brundage, Speer & Co., Milwaukee; O. K. Goodwin,
Norfolk; Brundage, Speer & Co., Milwaukee; Columbus

DONEGAN & SWIFT, New York Agents.

For the BEST and CHEAPEST FIRST-CLASS
STEAM PUMPS FOR ANY DUTY
Correspond with HUGHES BROS. Steam Pump Works, Cleveland, Ohio.

C. H. BURTON STEAM PUMP WORKS. - Cleveland, Ohio. U.S.A.



THE LAIDLAW & DUNN CO.,
CINCINNATI, O.

Manufacturers of the

"Hero" Vertical Boiler-Feeders,

—AND—

"STANDARD"

DUPLEX

PUMPS

Purchasers
—of—
McGOWAN
PUMP CO.
Est'd 1882.

WITH BRASS
REMOVABLE WATER CYLINDERS.
Send for descriptive circulars.

STEAM PUMPS.

We have just issued a new Illustrated Catalogue of our
Steam and Jet Pumps.

A copy will be mailed free on application.

BLAKESLEE MAN'G CO.

71 Washington St., DuQuoin, Ill.

KNOWLES STEAM PUMP WORKS,

BUILDERS OF

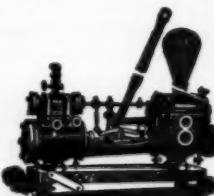
Single and Duplex Steam and Power Pumping Machinery

113 FEDERAL ST.
BOSTON.

93 LIBERTY ST.
NEW YORK.



PUMP AND CONDENSER.

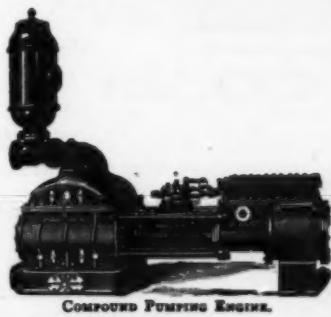


PRESSURE PUMP.

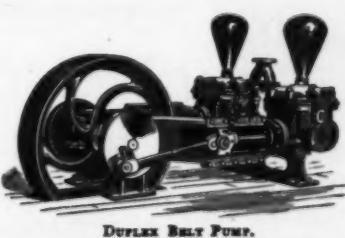


FIRE PUMP.

SEND FOR
ILLUSTRATED
CATALOGUE,
WITH
Price-Lists.



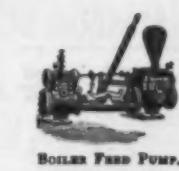
COMPOUND PUMPING ENGINE.



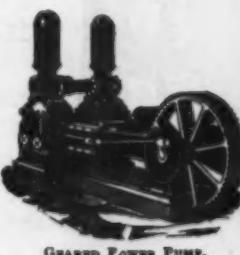
DUPLEX BELT PUMP.

ESTIMATES
FURNISHED
ON
APPLICATION.

CORRESPONDENCE
SOLICITED



BOILER FEED PUMP.



GEARED POWER PUMP.



AIR COMPRESSOR.

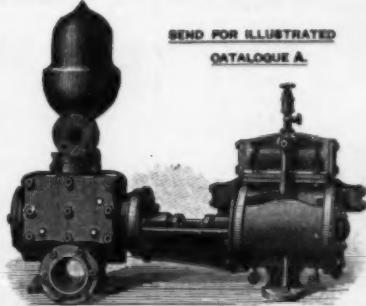
CAMERON STEAM PUMPS.



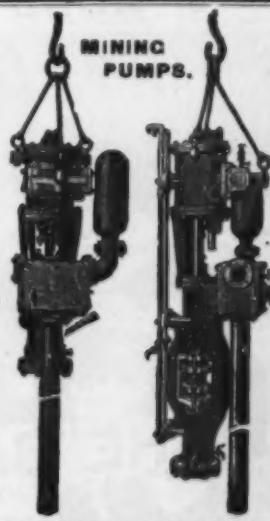
ARTESIAN WELL PUMPS.

PUMPS FOR
BOILER FEEDING
MINES,
REFINERIES,
BREWERIES,
TANNERIES,
IRRIGATING,
FIRE PURPOSES,
RAILROADS &
FILLING TANKS.
CRANK & FLY WHEEL
& VACUUM PUMPS.

SEND FOR ILLUSTRATED
CATALOGUE A.



SIMPLE,
COMPACT,
DURABLE,
EFFICIENT.
ADAPTED TO ALL
PURPOSES.
NO OUTSIDE
VALVE EAR.



The A. S. Cameron Steam Pump Works,
FOOT OF EAST 23D STREET. NEW YORK.

PISTON PATTERN. PLUNGER PATTERN.

COMPLETE STEAM PUMP
ONLY SEVEN DOLLARS
DEMAND THIS PUMP
OF YOUR
DEALER
OR WRITE
TO US FOR PRICES
VAN DUZEN'S PATENT
VAN DUZEN & TIFT.
SOLE MAKERS
CINCINNATI.

R. R. ROUSE PATENT ELECTRO-PLATED WELL POINT.



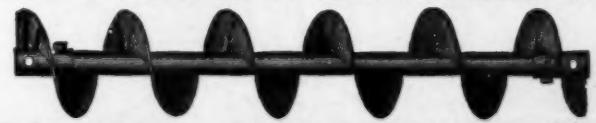
\$1.50; \$1.50; \$1.50; \$1.50.
\$1.50; \$1.50; \$1.50; \$1.50.
My 1/4 Point is 2 1/4 in. long and has
2 1/4 by 1/8 openings. These Recomend
two-thirds of entire surface of screen
section.

This is a NEW PATTERN, EXTRA STRONG; will stand rougher use than any in the market. A showing the openings before the wire gauze is soldered on. B after wire gauze is soldered on. C showing wire gauze and perforated brass soldered on. These Points are Electro-Plated, with Pure Black Tin inside and outside before receiving the coverings, there being no raw iron to corrode or rust or cause an unpleasant taste in the water. The Electric Process by which it is done is patented and exclusively owned and controlled by me for Driven Well Points in the United States. Warranted not to strip loose where soldered. Write for discounts and circulars.

R. R. ROUSE, Indianapolis, Ind.

The CALDWELL PATENT SPIRAL STEEL CONVEYOR,

Made of Steel, Double Bolted, Double Collared and Extra Strong Couplings.
SPECIAL ADAPTED TO USE IN HANDLING COTTON SEED AND ALL ITS PRODUCTS, FERTILIZERS AND PHOSPHATES.



Dealer in Mill and Grain Elevator Supplies.

Can Ship from Pittsburgh or Chicago.

H. W. CALDWELL,

131 and 133 West Washington Street,
CHICAGO, ILL.



THIS BUCKET is of
one piece steel. No
rivets. Light,
strong, durable. Dis-
charges well at high
speed.

NICHOLSON FILE CO.

PROVIDENCE, R. I.

FILES AND RASPS FOR EVERY INDUSTRY.

The Largest Works, +

The Greatest Product,

+ The Greatest Variety,

The Finest Goods, +

The Best Known,

+ The Readiest Sold

THE STANDARD GOODS.



E. E. GARVIN & CO.



Machinists, Manufacturers
+ and Dealers, +

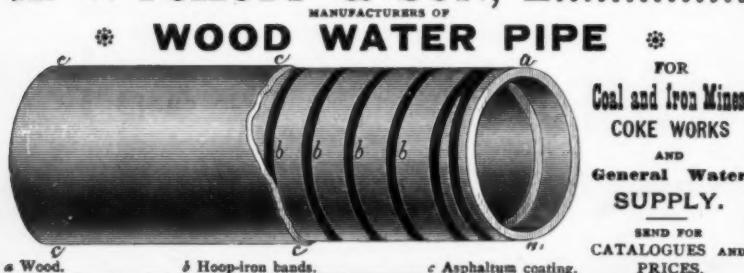
139 to 143 CENTRE ST.,
NEW YORK.

Lathes, Planers, Drills,
Milling Machines, Profilers,
Screw Machines, Cutter
Grinders, Gear Cut-
ting and Milling.

Index Drilling and Rack
Cutting. A good line of
Second Hand Tools
always on hand.

SMALL GEAR CUTTER.

A. WYCKOFF & SON, ELMIRA, N. Y.

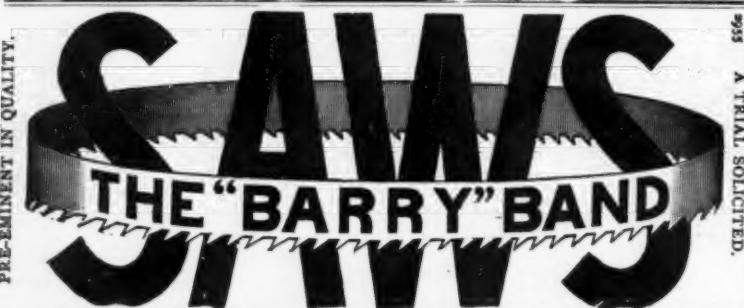


MANUFACTURERS OF

WOOD WATER PIPE *

FOR
Coal and Iron Mines
COKE WORKS
AND
General Water
SUPPLY.

SEND FOR
CATALOGUES AND
PRICES.



And the "BARRY" CIRCULAR SAWs,
Manufactured by W. B. BARRY SAW & SUPPLY CO., Nos. 134 to 138 S. Penn Street,
INDIANAPOLIS, IND.
SOUTHERN DEPARTMENT—CHATTANOOGA, TENN.

HYDRAULIC JACKS.

BEST IMPROVEMENTS. MOST STYLES.

Hydraulic Presses, Hydraulic Pumps, Valves & Fittings,
Vreeland's Transfer Jacks, Hydraulic and Screw Punches,
LEVER PUNCHES and SHEARS.

WATSON & STILLMAN

—210 E. 43d Street, NEW YORK.

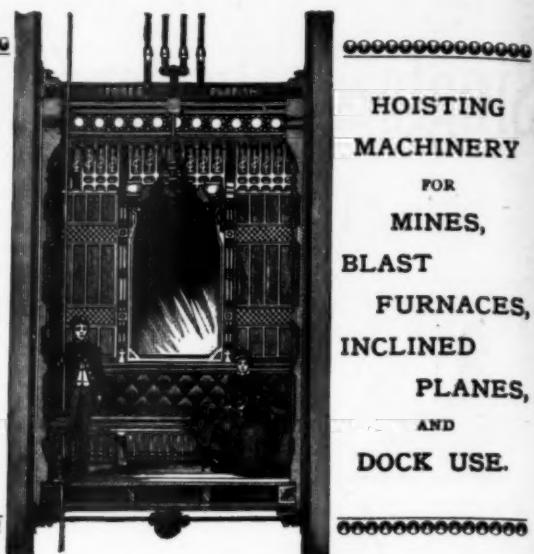
KREHL, HAUSER & CO., GIRARD, O.

TANNERS OF OAK LEATHER.

Specialties—Fine Harness, Superior Saddle Skirting, Black and Fair Bridle.

Stokes & Parrish Machine Co.

PASSENGER
AND
FREIGHT,
HYDRAULIC,
STEAM
AND
BELT
POWER.



HOISTING
MACHINERY
FOR
MINES,
BLAST
FURNACES,
INCLINED
PLANES,
AND
DOCK USE.

ELEVATORS

SAFETY, SPEED AND ECONOMY.

WORKS AND OFFICE:

30th and Chestnut Sts.,
PHILADELPHIA.

BRANCH OFFICE:

95 & 97 Liberty Street,
NEW YORK.

A. HOEN & CO.

LITHOGRAPHERS, BALTIMORE MD.

Our facilities for the production of

ARTISTIC

Color Work

AND ALL STYLES OF

Fine Commercial Engravings
Are Unsurpassed.

All work executed under careful
and personal supervision at prices
consistent with first-class produc-
tions. Sole proprietors of the

OCELEBRATED
LITHOCOASTIC PROCESS

Branch Establishment:
Hoens Building, RICHMOND, VA.

ESTABLISHED 1835.



TANITE

EMERY WHEELS and
GRINDING MACHINES

OR

MORTON, REED & CO.

BALTIMORE, MD.

For Saw-Mills,
Foundries, and
Machine Shops.
For circulars, address
THE TANITE CO.
Stroudsburg,
Monroe Co., Pa.



SHEPARD HARDWARE CO.,

MAMMOTH
FOUNDRY.
BUFFALO, N.Y.

